SEQUENCE LISTING

<110> Ortho-Clinical Diagnostics, Inc.
       Wang, Yixin

<120> Colorectal Cancer Prognostics

<130> VDX-5002 CIP

<140> tbd
<141> 2004-02-18

<150> 10/651,237
<151> 2003-08-28

<160> 94

<170> PatentIn version 3.1

<210> 1
<211> 489
<212> DNA
<213> human

<400> 1

```
agagccgcag gtcagtcgtg aagagggagc tctattgcca ccatgagttt ctccggcaag      60

taccaactgc agagccagga aaactttgaa gccttcatga aggcaatcgg tctgccggaa     120

gagctcatcc agaagggaa ggatatcaag ggggtgtcgg aaatcgtgca gaatgggaag     180

cacttcaagt tcaccatcac cgctgggtcc aaagtgatcc aaaacgaatt cacggtgggg     240

gaggaatgtg agctggagac aatgacaggg gagaaagtca agacagtggt tcagttggaa     300

ggtgacaata aactggtgac aactttcaaa aacatcaagt ctgtgaccga actcaacggc     360

gacataatca ccaataccat gacattgggt gacattgtct tcaagagaat cagcaagaga     420

atttaaacaa gtctgcattt catattattt tagtgtgtaa aattaatgta ataaagtgaa     480

ctttgtttt                                                             489
```

<210> 2
<211> 853
<212> DNA
<213> human

<400> 2

```
gcctgctgct ctggcccctg gtcctgtcct gttctccagc atggtgtgtc tgaggctccc      60

tggaggctcc tgcatggcag ttctgacagt gacactgatg gtgctgagct ccccactggc     120

tttggctggg gacaccagac cacgtttctt ggagtactct acgtctgagt gtcatttctt     180

caatgggacg gagcgggtgc ggtacctgga cagatacttc cataaccagg aggagaacgt     240

gcgcttcgac agcgacgtgg gggagttccg ggcggtgacg gagctggggc ggcctgctgc     300

ggagcactgg aacagccaga aggacctcct ggagcagaag cggggccggg tggacaacta     360

ctgcagacac aactacgggg ttgtggagag cttcacagtg cagcggcgag tccatcctaa     420
```

```
ggtgactgtg tatccttcaa agacccagcc cctgcagcac cataacctcc tggtctgttc      480

tgtgagtggt ttctatccag gcagcattga agtcaggtgg ttccggaatg gccaggaaga      540

gaagactggg gtggtgtcca caggcctgat ccacaatgga gactggacct tccagaccct      600

ggtgatgctg gaaacagttc ctcggagtgg agaggtttac acctgccaag tggagcaccc      660

aagcgtgaca agccctctca cagtggaatg gagagcacgg tctgaatctg cacagagcaa      720

gatgctgagt ggagtcgggg gctttgtgct gggcctgctc ttccttgggg ccgggctgtt      780

catctacttc aggaatcaga aaggacactc tggacttcag ccaagaggat cctgagctg       840

aagtgcagat gac                                                         853
```

```
<210>  3
<211>  3345
<212>  DNA
<213>  human

<400>  3
gaattccgtc tcgaccactg aatggaagaa aaggactttt aaccaccatt ttgtgactta       60

cagaaaggaa tttgaataaa gaaaactatg atacttcagg cccatcttca ctccctgtgt      120

cttcttatgc tttatttggc aactggatat ggccaagagg ggaagtttag tggacccctg      180

aaacccatga cattttctat ttatgaaggc caagaaccga gtcaaattat attccagttt      240

aaggccaatc ctcctgctgt gacttttgaa ctaactgggg agacagacaa catatttgtg      300

atagaacggg agggacttct gtattacaac agagccttgg acagggaaac aagatctact      360

cacaatctcc aggttgcagc cctggacgct aatggaatta tagtggaggg tccagtccct      420

atcaccatag aagtgaagga catcaacgac aatcgaccca cgtttctcca gtcaaagtac      480

gaaggctcag taaggcagaa ctctcgccca ggaaagccct tcttgtatgt caatgccaca      540

gacctggatg atccggccac tcccaatggc cagctttatt accagattgt catccagctt      600

cccatgatca caatgtcat gtactttcag atcaacaaca aaacgggagc catctctctt      660

acccgagagg gatctcagga attgaatcct gctaagaatc cttcctataa tctggtgatc      720

tcagtgaagg acatgggagg ccagagtgag aattccttca gtgataccac atctgtggat      780

atcatagtga cagagaatat ttggaaagca ccaaaacctg tggagatggt ggaaaactca      840

actgatcctc accccatcaa aatcactcag gtgcggtgga tgatcccgg tgcacaatat      900

tccttagttg acaaagagaa gctgccaaga ttcccatttt caattgacca ggaaggagat      960

atttacgtga ctcagccctt ggaccgagaa gaaaaggatg catatgtttt ttatgcagtt     1020

gcaaaggatg agtacggaaa accactttca tatccgctgg aaattcatgt aaaagttaaa     1080

gatattaatg ataatccacc tacatgtccg tcaccagtaa ccgtatttga ggtccaggag     1140

aatgaacgac tgggtaacag tatcgggacc cttactgcac atgacaggga tgaagaaaat     1200
```

```
actgccaaca gttttctaaa ctacaggatt gtggagcaaa ctcccaaact tcccatggat    1260

ggactcttcc taatccaaac ctatgctgga atgttacagt tagctaaaca gtccttgaag    1320

aagcaagata ctcctcagta caacttaacg atagaggtgt ctgacaaaga tttcaagacc    1380

ctttgttttg tgcaaatcaa cgttattgat atcaatgatc agatccccat ctttgaaaaa    1440

tcagattatg gaaacctgac tcttgctgaa gacacaaaca ttgggtccac catcttaacc    1500

atccaggcca ctgatgctga tgagccattt actgggagtt ctaaaattct gtatcatatc    1560

ataaagggag acagtgaggg acgcctgggg gttgacacag atccccatac caacaccgga    1620

tatgtcataa ttaaaaagcc tcttgatttt gaaacagcag ctgtttccaa cattgtgttc    1680

aaagcagaaa atcctgagcc tctagtgttt ggtgtgaagt acaatgcaag ttcttttgcc    1740

aagttcacgc ttattgtgac agatgtgaat gaagcacctc aattttccca acacgtattc    1800

caagcgaaag tcagtgagga tgtagctata ggcactaaag tgggcaatgt gactgccaag    1860

gatccagaag gtctggacat aagctattca ctgaggggag acacaagagg ttggcttaaa    1920

attgaccacg tgactggtga gatctttagt gtggctccat tggacagaga agccggaagt    1980

ccatatcggg tacaagtggt ggccacagaa gtaggggggt cttccttaag ctctgtgtca    2040

gagttccacc tgatccttat ggatgtgaat gacaaccctc ccaggctagc caaggactac    2100

acgggcttgt tcttctgcca tcccctcagt gcacctggaa gtctcatttt cgaggctact    2160

gatgatgatc agcacttatt tcggggtccc cattttacat tttccctcgg cagtggaagc    2220

ttacaaaacg actgggaagt ttccaaaatc aatggtactc atgcccgact gtctaccagg    2280

cacacagact ttgaggagag ggcgtatgtc gtcttgatcc gcatcaatga tggggggtcgg    2340

ccacccttgg aaggcattgt ttctttacca gttacattct gcagttgtgt ggaaggaagt    2400

tgtttccggc cagcaggtca ccagactggg atacccactg tgggcatggc agttggtata    2460

ctgctgacca cccttctggt gattggtata attttagcag ttgtgtttat ccgcataaag    2520

aaggataaag gcaaagataa tgttgaaagt gctcaagcat ctgaagtcaa acctctgaga    2580

agctgaattt gaaaaggaat gtttgaattt atatagcaag tgctatttca gcaacaacca    2640

tctcatccta ttacttttca tctaacgtgc attataattt tttaaacaga tattccctct    2700

tgtcctttaa tatttgctaa atatttcttt tttgaggtgg agtcttgctc tgtcgcccag    2760

gctggagtac agtggtgtga tcccagctca ctgcaacctc cgcctcctgg gttcacatga    2820

ttctcctgcc tcagcttcct aagtagctgg gtttacaggc acccaccacc atgcccagct    2880

aattttttgta tttttaatag agacggggtt tcgccatttg gccaggctgg tcttgaactc    2940

ctgacgtcaa gtgatctgcc tgccttggtc tcccaataca ggcatgaacc actgcaccca    3000

cctacttaga tatttcatgt gctatagaca ttagagagat ttttcatttt tccatgacat    3060
```

```
ttttcctctc tgcaaatggc ttagctactt gtgttttttcc cttttggggc aagacagact   3120

cattaaatat tctgtacatt ttttctttat caaggagata tatcagtgtt gtctcataga   3180

actgcctgga ttccatttat gtttttttctg attccatcct gtgtcccctt catccttgac   3240

tcctttggta tttcactgaa tttcaaacat ttgtcagaga agaaaaaagt gaggactcag   3300

gaaaaataaa taaataaaag aacagccttt tgcggccgcg aattc              3345
```

<210> 4
<211> 1924
<212> DNA
<213> human

<400> 4

```
ccatgacgcc cgccctcaca gccctgctct gccttgggct gagtctgggc cccaggaccc     60

gcatgcaggc agggcccttc cccaaaccca ccctctgggc tgagccaggc tctgtgatca    120

gctggggggag ccccgtgacc atctggtgtc aggggagcct ggaggcccag gagtaccaac   180

tggataaaga gggaagccca gagccctggg acagaaataa cccactggaa cccaagaaca    240

aggccagatt ctccatccca tccatgacac agcaccatgc agggagatac cgctgccact    300

attacagctc tgcaggctgg tcagagccca gcgaccccct ggagctggtg atgacaggat    360

tctacaacaa acccacccttc tcagccctgc ccagccctgt ggtggcctca ggggggaata    420

tgaccctccg atgtggctca cagaagggat atcaccattt tgttctgatg aaggaaggag    480

aacaccagct cccccggacc ctggactcac agcagctcca cagtgggggg ttccaggccc    540

tgttccctgt gggccccgtg accccccagcc acaggcgtgt ctaggaagcc ctccctcctg    600

accctgcagg gccctgtcct ggcccctggg cagagcctga ccctccagtg tggctctgat    660

gtcggctacg acagatttgt tctgtataag gagggggaac gtgacttcct ccagcgccct    720

ggccagcagc cccaggctgg gctctcccag gccaacttca ccctgggccc tgtgagccgc    780

tcctacgggg gccagtacag gtgctatggt gcacacaacc tctcctccga gtggtcggcc    840

cccagtgacc ccctggacat cctgatcaca ggacagatct atgacaccgt ctccctgtca    900

gcacagccgg gccccacagt ggcctcagga gagaacatga ccctgctgtg tcagtcacgg    960

gggtattttg acacttttcct tctgaccaaa gaaggggcag cccatccccc actgcgtctg   1020

agatcaatgt acggagctca taagtaccag gctgaattcc ccatgagtcc tgtgacctca   1080

gcccacgcgg ggacctacag gtgctacggc tcacgcagct ccaacccccca cctgctgtct   1140

ttccccagtg agcccctgga actcatggtc tcaggacact ctggaggctc cagcctccca   1200

cccacagggc cgccctccac acctggtctg ggaagatacc tggaggtttt gattggggtc   1260

tcggtggcct tcgtcctgct gctcttcctc ctcctcttcc tcctcctccg acgtcagcgt   1320

cacagcaaac acaggacatc tgaccagaga aagactgatt tccagcgtcc tgcagggggct   1380
```

```
gcggagacag agcccaagga caggggcctg ctgaggaggt ccagcccagc tgctgacgtc    1440
caggaagaaa acctctagcc cacacgatga agacccccag gcagtgacgt atgccccggt    1500
gaaacactcc agtcctagga gagaaatggc ctctcctccc tcctcactgt ctggggaatt    1560
cctggacaca aaggacagac aggtggaaga ggacaggcag atggacactg aggctgctgc    1620
atctgaagcc tcccaggatg tgacctacgc ccagctgcac agcttgaccc ttagacggaa    1680
ggcaactgag cctcctccat cccaggaagg ggaacctcca gctgagccca gcatctacgc    1740
cactctggcc atccactagc ccggggggta cgcagacccc acactcagca gaaggagact    1800
caggactgct gaaggcacgg gagctgcccc cagtggacac cagtgaaccc cagtcagcct    1860
ggacccctaa cacagaccat gaggagacgc tgggaacttg tgggactcac ctgactcaaa    1920
gatg                                                                 1924
```

<210> 5
<211> 1536
<212> DNA
<213> human

<400> 5
```
gtgacgcgag gctctgcgga gaccaggagt cagactgtag gacgacctcg ggtcccacgt      60
gtccccggta ctcgccggcc ggagccccg gcttcccggg gccggggggac cttagcggca     120
cccacacaca gcctactttc caagcggagc catgtctggt aacggcaatg cggctgcaac     180
ggcggaagaa aacagcccaa agatgagagt gattcgcgtg ggtacccgca agagccagct     240
tgctcgcata cagacggaca gtgtggtggc aacattgaaa gcctcgtacc ctggcctgca     300
gtttgaaatc attgctatgt ccaccacagg gacaagatt cttgatactg cactctctaa     360
gattggagag aaaagcctgt ttaccaagga gcttgaacat gccctggaga agaatgaagt     420
ggacctggtt gttcactcct tgaaggacct gcccactgtg cttcctcctg gcttcaccat     480
cggagccatc tgcaagcggg aaaaccctca tgatgctgtt gtctttcacc aaaaatttgt     540
tgggaagacc ctagaaaccc tgccagagaa gagtgtggtg gaaccagct ccctgcgaag     600
agcagcccag ctgcagagaa agttcccgca tctggagttc aggagtattc ggggaaacct     660
caacacccgg cttcggaagc tggacgagca gcaggagttc agtgccatca tcctggcaac     720
agctggcctg cagcgcatgg gctggcacaa ccgggtgggg cagatcctgc accctgagga     780
atgcatgtat gctgtgggcc aggggggcctt gggcgtggaa gtgcgagcca aggaccagga     840
catcttggat ctggtgggtg tgctgcacga tcccgagact ctgcttcgct gcatcgctga     900
aagggccttc ctgaggcacc tggaaggagg ctgcagtgtg ccagtagccg tgcatacagc     960
tatgaaggat gggcaactgt acctgactgg aggagtctgg agtctagacg gctcagatag    1020
catacaagag accatgcagg ctaccatcca tgtccctgcc cagcatgaag atggccctga    1080
```

```
ggatgaccca cagttggtag gcatcactgc tcgtaacatt ccacgagggc cccagttggc    1140

tgcccagaac ttgggcatca gcctggccaa cttgttgctg agcaaaggag ccaaaaacat    1200

cctggatgtt gcacggcagc ttaacgatgc ccattaactg gtttgtgggg cacagatgcc    1260

tggggttgctg ctgtccagtg cctacatccc gggcctcagt gccccattct cactgctatc    1320

tggggagtga ttaccccggg agactgaact gcagggttca agccttccag ggatttgcct    1380

caccttgggg ccttgatgac tgccttgcct cctcagtatg tggggggcttc atctctttag    1440

agaagtccaa gcaacagcct ttgaatgtaa ccaatcctac taataaacca gttctgaagg    1500

taaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaa                               1536
```

<210> 6
<211> 3345
<212> DNA
<213> human

<400> 6
```
gaattccgtc tcgaccactg aatggaagaa aaggactttt aaccaccatt ttgtgactta     60

cagaaaggaa tttgaataaa gaaaactatg atacttcagg cccatcttca ctccctgtgt    120

cttcttatgc tttatttggc aactggatat ggccaagagg ggaagtttag tggacccctg    180

aaacccatga catttttctat ttatgaaggc caagaaccga gtcaaattat attccagttt    240

aaggccaatc ctcctgctgt gacttttgaa ctaactgggg agacagacaa catatttgtg    300

atagaacggg agggacttct gtattacaac agagccttgg acagggaaac aagatctact    360

cacaatctcc aggttgcagc cctggacgct aatggaatta tagtggaggg tccagtccct    420

atcaccatag aagtgaagga catcaacgac aatcgaccca cgtttctcca gtcaaagtac    480

gaaggctcag taaggcagaa ctctcgccca ggaaagccct tcttgtatgt caatgccaca    540

gacctggatg atccggccac tcccaatggc cagctttatt accagattgt catccagctt    600

cccatgatca caatgtcat gtactttcag atcaacaaca aaacgggagc catctctctt    660

acccgagagg gatctcagga attgaatcct gctaagaatc cttcctataa tctggtgatc    720

tcagtgaagg acatgggagg ccagagtgag aattccttca gtgataccac atctgtggat    780

atcatagtga cagagaatat ttggaaagca ccaaaacctg tggagatggt ggaaaactca    840

actgatcctc accccatcaa aatcactcag gtgcggtgga atgatcccgg tgcacaatat    900

tccttagttg acaaagagaa gctgccaaga ttcccatttt caattgacca ggaaggagat    960

atttacgtga ctcagccctt ggaccgagaa gaaaaggatg catatgtttt ttatgcagtt   1020

gcaaaggatg agtacggaaa accactttca tatccgctgg aaattcatgt aaaagttaaa   1080

gatattaatg ataatccacc tacatgtccg tcaccagtaa ccgtatttga ggtccaggag   1140

aatgaacgac tgggtaacag tatcgggacc cttactgcac atgacaggga tgaagaaaat   1200
```

```
actgccaaca gttttctaaa ctacaggatt gtggagcaaa ctcccaaact tcccatggat    1260

ggactcttcc taatccaaac ctatgctgga atgttacagt tagctaaaca gtccttgaag    1320

aagcaagata ctcctcagta caacttaacg atagaggtgt ctgacaaaga tttcaagacc    1380

cttttgtttg tgcaaatcaa cgttattgat atcaatgatc agatccccat cttgtgaaaaa   1440

tcagattatg gaaacctgac tcttgctgaa gacacaaaca ttgggtccac catcttaacc    1500

atccaggcca ctgatgctga tgagccattt actgggagtt ctaaaattct gtatcatatc    1560

ataaagggag acagtgaggg acgcctgggg gttgacacag atccccatac caacaccgga    1620

tatgtcataa ttaaaaagcc tcttgatttt gaaacagcag ctgtttccaa cattgtgttc    1680

aaagcagaaa atcctgagcc tctagtgttt ggtgtgaagt acaatgcaag ttcttttgcc    1740

aagttcacgc ttattgtgac agatgtgaat gaagcacctc aattttccca acacgtattc    1800

caagcgaaag tcagtgagga tgtagctata ggcactaaag tgggcaatgt gactgccaag    1860

gatccagaag gtctggacat aagctattca ctgaggggag acacaagagg ttggcttaaa    1920

attgaccacg tgactggtga gatctttagt gtggctccat ggacagaga agccggaagt     1980

ccatatcggg tacaagtggt ggccacagaa gtagggggggt cttccttaag ctctgtgtca    2040

gagttccacc tgatccttat ggatgtgaat gacaaccctc ccaggctagc caaggactac    2100

acgggcttgt tcttctgcca tcccctcagt gcacctggaa gtctcatttt cgaggctact    2160

gatgatgatc agcacttatt tcggggtccc cattttacat tttccctcgg cagtggaagc    2220

ttacaaaacg actgggaagt ttccaaaatc aatggtactc atgcccgact gtctaccagg    2280

cacacagact ttgaggagag ggcgtatgtc gtcttgatcc gcatcaatga tgggggtcgg    2340

ccacccttgg aaggcattgt ttctttacca gttacattct gcagttgtgt ggaaggaagt    2400

tgtttccggc cagcaggtca ccagactggg atacccactg tgggcatggc agttggtata    2460

ctgctgacca cccttctggt gattggtata attttagcag ttgtgtttat ccgcataaag    2520

aaggataaag gcaaagataa tgttgaaagt gctcaagcat ctgaagtcaa acctctgaga    2580

agctgaattt gaaaaggaat gtttgaattt atatagcaag tgctatttca gcaacaacca    2640

tctcatccta ttacttttca tctaacgtgc attataattt tttaaacaga tattccctct    2700

tgtcctttaa tatttgctaa atatttcttt tttgaggtgg agtcttgctc tgtcgcccag    2760

gctggagtac agtggtgtga tcccagctca ctgcaacctc cgcctcctgg gttcacatga    2820

ttctcctgcc tcagcttcct aagtagctgg gtttacaggc acccaccacc atgcccagct    2880

aattttttgta tttttaatag agacggggtt tcgccatttg ccaggctgg tcttgaactc    2940

ctgacgtcaa gtgatctgcc tgccttggtc tcccaataca ggcatgaacc actgcaccca    3000

cctacttaga tatttcatgt gctatagaca ttagagagat ttttcatttt tccatgacat    3060

ttttcctctc tgcaaatggc ttagctactt gtgttttttcc ctttttgggggc aagacagact    3120
```
Page 7

cattaaatat tctgtacatt ttttctttat caaggagata tatcagtgtt gtctcataga   3180

actgcctgga ttccatttat gtttttttctg attccatcct gtgtcccctt catccttgac   3240

tcctttggta tttcactgaa tttcaaacat ttgtcagaga agaaaaaagt gaggactcag   3300

gaaaaataaa taaataaaag aacagccttt tgcggccgcg aattc   3345

<210> 7
<211> 1924
<212> DNA
<213> human

<400> 7
ccatgacgcc cgccctcaca gccctgctct gccttgggct gagtctgggc cccaggaccc   60

gcatgcaggc agggcccttc cccaaaccca ccctctgggc tgagccaggc tctgtgatca   120

gctggggggag ccccgtgacc atctggtgtc aggggagcct ggaggcccag gagtaccaac   180

tggataaaga gggaagccca gagccctggg acagaaataa cccactggaa cccaagaaca   240

aggccagatt ctccatccca tccatgacac agcaccatgc agggagatac cgctgccact   300

attacagctc tgcaggctgg tcagagccca gcgaccccct ggagctggtg atgacaggat   360

tctacaacaa acccacccctc tcagccctgc ccagccctgt ggtggcctca gggggggaata   420

tgaccctccg atgtggctca cagaagggat atcaccattt tgttctgatg aaggaaggag   480

aacaccagct ccccccggacc ctggactcac agcagctcca cagtgggggg ttccaggccc   540

tgttccctgt gggccccgtg accccccagcc acaggcgtgt ctaggaagcc ctccctcctg   600

accctgcagg gccctgtcct ggcccctggg cagagcctga ccctccagtg tggctctgat   660

gtcggctacg acagatttgt tctgtataag gaggggggaac gtgacttcct ccagcgccct   720

ggccagcagc cccaggctgg gctctcccag gccaacttca ccctgggccc tgtgagccgc   780

tcctacgggg gccagtacag gtgctatggt gcacacaacc tctcctccga gtggtcggcc   840

cccagtgacc ccctggacat cctgatcaca ggacagatct atgacaccgt ctccctgtca   900

gcacagccgg gccccacagt ggcctcagga gagaacatga ccctgctgtg tcagtcacgg   960

gggtatttttg acactttcct tctgaccaaa gaaggggcag cccatccccc actgcgtctg   1020

agatcaatgt acggagctca taagtaccag gctgaattcc ccatgagtcc tgtgacctca   1080

gcccacgcgg ggacctacag gtgctacggc tcacgcagct ccaacccccca cctgctgtct   1140

ttccccagtg agcccctgga actcatggtc tcaggacact ctggaggctc cagcctccca   1200

cccacagggc cgccctccac acctggtctg ggaagatacc tggaggtttt gattgggggtc   1260

tcggtggcct tcgtcctgct gctcttcctc ctcctcttcc tcctcctccg acgtcagcgt   1320

cacagcaaac acaggacatc tgaccagaga aagactgatt ccagcgtcc tgcaggggct   1380

gcggagacag agcccaagga caggggcctg ctgaggaggt ccagcccagc tgctgacgtc   1440

```
caggaagaaa acctctagcc cacacgatga agaccccag gcagtgacgt atgccccggt    1500

gaaacactcc agtcctagga gagaaatggc ctctcctccc tcctcactgt ctggggaatt    1560

cctggacaca aaggacagac aggtggaaga ggacaggcag atggacactg aggctgctgc    1620

atctgaagcc tcccaggatg tgacctacgc ccagctgcac agcttgaccc ttagacggaa    1680

ggcaactgag cctcctccat cccaggaagg ggaacctcca gctgagccca gcatctacgc    1740

cactctggcc atccactagc ccgggggta cgcagacccc acactcagca gaaggagact    1800

caggactgct gaaggcacgg gagctgcccc cagtggacac cagtgaaccc cagtcagcct    1860

ggaccccttaa cacagaccat gaggagacgc tgggaacttg tgggactcac ctgactcaaa    1920

gatg                                                                  1924


<210>   8
<211>   1775
<212>   DNA
<213>   human

<400>   8
agcggccggg gcgagccagc gagagggcgc gagcggcggc gctgcctgca gcctgcagcc     60

tgcagcctcc ggccggccgg cgagccagtg cgcgtgcgcg gcggcggcct ccgcagcgac    120

cggggagcgg actgaccggc gggagggcta gcgagccagc ggtgtgaggc gcgaggcgag    180

gccgagccgc gagcgacatg ggggaccggg agcagctgct gcagcgggcg cggctggccg    240

agcaggcgga gcgctacgac gacatggcct ccgctatgaa ggcggtgaca gagctgaatg    300

aacctctctc caatgaagat cgaaatctcc tctctgtggc ctacaagaat gtggttggtg    360

ccaggcgatc ttcctggagg gtcattagca gcattgagca gaaaaccatg gctgatggaa    420

acgaaaagaa attggagaaa gttaaagctt accgggagaa gattgagaag gagctggaga    480

cagtttgcaa tgatgtcctg tctctgcttg acaagttcct gatcaagaac tgcaatgatt    540

tccagtatga gagcaaggtg ttttacctga aaatgaaggg tgattactac cgctacttag    600

cagaggtcgc ttctggggag aagaaaaaca gtgtggtcga agcttctgaa gctgcctaca    660

aggaagcctt tgaaatcagc aaagagcaga tgcaacccac gcatcccatc cggctgggcc    720

tggccctcaa cttctccgtg ttctactatg agatccagaa tgcacctgag caagcctgcc    780

tcttagccaa acaagccttc gatgatgcca tagctgagct ggacacacta aacgaggatt    840

cctataagga ctccacgctg atcatgcagt tgctgcgaga caacctcacc ctctggacga    900

gcgaccagca ggatgaagaa gcaggagaag caactgaag atccttcagg tcccctggcc    960

cttccttcac ccaccacccc catcatcacc gattcttcct tgccacaatc actaaatatc   1020

tagtgctaaa cctatctgta ttggcagcac agctactcag atctgcactc ctgtctcttg   1080

ggaagcagtt tcagataaat catgggcatt gctggactga tggttgcttt gagcccacag   1140
```

```
gagctcccctt tttgaattgt gtggagaagt gtgttctgat gaggcatttt actatgcctg    1200

ttgatctatg ggaaatctag gcgaaagtaa tggggaagat tagaaagaat tagccaacca    1260

ggctacagtt gatatttaaa agatccattt aaaacaagct gatagtgttt cgttaagcag    1320

tacatcttgt gcatgcaaaa atgaattcac ccctcccacc tctttcttca attaatggaa    1380

aactgttaag ggaagctgat acagagagac aacttgctcc tttccatcag ctttataata    1440

aactgtttaa cgtgaggttt cagtagctcc ttggttttgc ctctttaaat tatgacgtgc    1500

acaaaccttc ttttcaatgc aatgcatctg aaagttttga tacttgtaac ttttttttttt    1560

ttttggttgc aattgtttaa gaatcatgga tttattttttt gtaactcttt ggctattgtc    1620

cttgtgtatc ctgacagcgc catgtgtgtc agcccatgtc aatcaagatg ggtgattatg    1680

aaatgccaga cttctaaaat aaatgttttg gaattcaatg ggtaaataaa tgctgctttg    1740

gggatattaa aaaaaaaaaa aaaaaaaaaa aaaaa    1775
```

<210> 9
<211> 1724
<212> DNA
<213> human

<400> 9
```
cttttttggag acagattcgc agtggtcgct tcttctcctt ggatttgtta aggattccaa    60

gtaactctta tttggagaga agacgatctg cacttcgcat tttggcattg acatttaatt    120

ttagggtcct ttatatagaa gggagagtag ctacatgaat gtgtaagatc ttggaggaag    180

acagcagaga gagagagaga gatcagagat cccagggtta aaagttggag aaatttcaca    240

gtacatcatc caaaagagga gtccatgatg gaggcagagg taaacttgga gaggacagga    300

agatgtcacc caagcgcata gctaaaagaa ggtcccccc agcagatgcc atccccaaaa    360

gcaagaaggt gaaggtctca cacaggtccc acagcacaga acccggcttg gtgctgacac    420

taggccaggg cgacgtgggc cagctggggc tgggtgagaa tgtgatggag aggaagaagc    480

cggccctggt atccattccg gaggatgttg tgcaggctga ggctgggggc atgcacaccg    540

tgtgtctaag caaaagtggc caggtctatt ccttcggctg caatgatgag ggtgccctgg    600

gaagggacac atcagtggag ggctcggaga tggtccctgg gaaagtggag ctgcaagaga    660

aggtggtaca ggtgtcagca ggagacagtc acacagcagc cctcaccgat gatggccgtg    720

tcttcctctg gggctccttc cgggacaata acggtgtgat tggactgttg gagcccatga    780

agaagagcat ggtgcctgtg caggtgcagc tggatgtgcc tgtggtaaag gtggcctcag    840

gaaacgacca cttggtgatg ctgacagctg atggtgacct ctacaccttg ggctgcgggg    900

aacagggcca gctaggccgt gtgcctgagt tatttgccaa ccgtggtggc cggcaaggcc    960

tcgaacgact cctggtcccc aagtgtgtga tgctgaaatc caggggaagc cggggccacg    1020
```

```
tgagattcca ggatgccttt tgtggtgcct atttcacctt tgccatctcc catgagggcc    1080

acgtgtacgg cttcggcctc tccaactacc atcagcttgg aactccgggc acagaatctt    1140

gcttcatacc ccagaaccta acatccttca agaattccac caagtcctgg gtgggcttct    1200

ctggtggcca gcaccataca gtctgcatgg attcggaagg aaaagcatac agcctgggcc    1260

gggctgagta tgggcggctg ggccttggag agggtgctga ggagaagagc atacccaccc    1320

tcatctccag gctgcctgct gtctcctcgg tggcttgtgg ggcctctgtg gggtatgctg    1380

tgaccaagga tggtcgtgtt ttcgcctggg gcatgggcac caactaccag ctgggcacag    1440

ggcaggatga ggacgcctgg agccctgtgg agatgatggg caaacagctg gagaaccgtg    1500

tggtcttatc tgtgtccagc gggggccagc atacagtctt attagtcaag gacaaagaac    1560

agagctgatg aagcctctga gggcctggct tctgtcctgc acaacctccc tcacagaaca    1620

gggaagcagt gacagctgca gatggcagcg ggcctctccc cagccctgag cactgtgtca    1680

gttcctgcct tttctcatca gcagaacaga atccttttcc tctt                     1724
```

<210> 10
<211> 1622
<212> DNA
<213> human

<400> 10
```
cgttggcgtt tacgtgtgga agagcggaag agttttgctt ttcgtgcgcg ccttcgaaaa     60

ctgcctgccg ctgtctgagg agtccacccg aaacctcccc tcctccgccg gcagccccgc    120

gctgagctcg ccgacccaag ccagcgtggg cgaggtggga agtgcgcccg acccgcgcct    180

ggagctgcgc ccccgagtgc ccatggctac aagggtgctg agcatgagcg cccgcctggg    240

acccgtgccc cagccgccgg cgccgcagga cgagccggtg ttcgcgcagc tcaagccggt    300

gctgggcgcc gcgaatccgg cccgcgacgc ggcgctcttc cccggcgagg agctgaagca    360

cgcgcaccac cgcccgcagg cgcagcccgc gcccgcgcag gccccgcagc cggcccagcc    420

gcccgccacc ggcccgcggc tgcctccaga ggacctggtc cagacaagat gtgaaatgga    480

gaagtatctg acacctcagc ttcctccagt tcctataatt ccagagcata aaaagtatag    540

acgagacagt gcctcagtcg tagaccagtt cttcactgac actgaagggt taccttacag    600

tatcaacatg aacgtcttcc tccctgacat cactcacctg agaactggcc tctacaaatc    660

ccagagaccg tgcgtaacac acatcaagac agaacctgtt gccattttca gccaccagag    720

tgaaacgact gcccctcctc cggccccgac ccaggccctc cctgagttca ccagtatatt    780

cagctcacac cagaccgcag ctccagaggt gaacaatatt ttcatcaaac aagaacttcc    840

tacaccagat cttcatcttt ctgtccctac ccagcagggc cacctgtacc agctactgaa    900

tacaccggat ctagatatgc ccagttctac aaatcagaca gcagcaatgg acactcttaa    960
```

```
tgtttctatg tcagctgcca tggcaggcct taacacacac acctctgctg ttccgcagac   1020

tgcagtgaaa caattccagg gcatgccccc ttgcacatac acaatgccaa gtcagtttct   1080

tccacaacag gccacttact ttcccccgtc accaccaagc tcagagcctg gaagtccaga   1140

tagacaagca gagatgctcc agaatttaac cccacctcca tcctatgctg ctacaattgc   1200

ttctaaactg gcaattcaca atccaaattt acccaccacc ctgccagtta actcacaaaa   1260

catccaacct gtcagataca atagaaggag taaccccgat ttggagaaac gacgcatcca   1320

ctactgcgat taccctggtt gcacaaaagt ttataccaag tcttctcatt taaaagctca   1380

cctgaggact cacactggtg aaaagccata caagtgtacc tgggaaggct gcgactggag   1440

gttcgcgcga tcggatgagc tgacccgcca ctaccggaag cacacaggcg ccaagccctt   1500

ccagtgcggg gtgtgcaacc gcagcttctc gcgctctgac cacctggccc tgcatatgaa   1560

gaggcaccag aactgagcac tgcccgtgtg acccgttcca ggtccctgg gctccctcaa   1620

at                                                                   1622
```

<210> 11
<211> 1221
<212> DNA
<213> human

<400> 11
```
cgcaggctgg aaggaagacg aacctacgaa gcagagatct gaagacagca tgtacacagc     60

cattccccag agtggctctc cattcccagg ctcagtgcag gatccaggcc tgcatgtgtg    120

gcgggtggag aagctgaagc cggtgcctgt ggcgcaagag aaccagggcg tcttcttctc    180

gggggactcc tacctagtgc tgcacaatgg cccagaagag gtttcccatc tgcacctgtg    240

gataggccag cagtcatccc gggatgagca gggggcctgt gccgtgctgg ctgtgcacct    300

caacacgctg ctgggagagc ggcctgtgca gcaccgcgag gtgcagggca atgagtctga    360

cctcttcatg agctacttcc cacggggcct caagtaccag gaaggtggtg tggagtcagc    420

atttcacaag acctccacag gagccccagc tgccatcaag aaactctacc aggtgaaggg    480

gaagaagaac atccgtgcca ccgagcgggc actgaactgg acagcttca acactggggga   540

ctgcttcatc ctggacctgg gccagaacat cttcgcctgg tgtggtggaa agtccaacat    600

cctggaacgc aacaaggcga gggacctggc cctggccatc cgggacagtg agcgacaggg    660

caaggcccag gtggagattg tcactgatgg ggaggagcct gctgagatga tccaggtcct    720

gggcccccaag cctgctctga aggagggcaa ccctgaggaa gacctcacag ctgacaaggc   780

aaatgcccag gccgcagctc tgtataaggt ctctgatgcc actggacaga tgaacctgac    840

caaggtggct gactccagcc cctttgccct tgaactgctg atatctgatg actgctttgt    900

gctggacaac gggctctgtg gcaagatcta tatctggaag gggcgaaaag cgaatgagaa    960
```

```
ggagcggcag gcagccctgc aggtggccga gggcttcatc tcgcgcatgc agtacgcccc    1020

gaacactcag gtggagattc tgcctcaggg ccgtgagagt cccatcttca agcaattttt    1080

caaggactgg aaatgagggt gggcgtcttc ctgccccatg ctcccctgcc ccccaccacc    1140

tgcctgcttg cttctctggc tgcctggtca gtgcagaggt gcccctgca gatgttcaat      1200

aaaggagaca agtgctttcc c                                              1221
```

<210> 12
<211> 1460
<212> DNA
<213> human

<400> 12
```
acccccatctt catctggcct tgactctgcc cttgagggc ctaggggtgc agccagcctg       60

ctccgagctc ccctgcagat ggaggaggcc atcctggtcc cctgcgtgct ggggctcctg      120

ctgctgccca tcctggccat gttgatggca ctgtgtgtgc actgccacag actgccaggc     180

tcctacgaca gcacatcctc agatagtttg tatccaaggg gcatccagtt caaacggcct      240

cacacggttg cccccctggcc acctgcctac ccacctgtca cctcctaccc accccctgagc    300

cagccagacc tgctcccccat cccaagatcc ccgcagcccc ttggggggctc ccaccggacg    360

ccatcttccc ggcgggattc tgatggtgcc aacagtgtgg cgagctacga gaacgagggt     420

gcgtctggga tccgaggtgc ccaggctggg tggggagtct ggggtccgtc ctggactagg      480

ctgaccccctg tgtcgttacc cccagaacca gcctgtgagg atgcagatga ggatgaggac    540

gactatcaca acccaggcta cctggtggtg cttcctgaca gcaccccggc cactagcact    600

gctgccccat cagctcctgc actcagcacc cctggcatcc gagacagtgc cttctccatg      660

gagtccattg atgattacgt gaacgttccg gagagcgggg agagcgcaga agcgtctctg      720

gatggcagcc gggagtatgt gaatgtgtcc caggaactgc atcctggagc ggctaagact      780

gagcctgccg ccctgagttc ccaggaggca gaggaagtgg aggaagaggg ggctccagat     840

tacgagaatc tgcaggagct gaactgaggg cctgtggagg ccgagtctgt cctggaacca      900

ggcttgcctg ggacggctga gctgggcagc tggaagtggc tctggggtcc tcacatggcg     960

tcctgcccctt gctccagcct gacaacagcc tgagaaatcc ccccgtaact tattatcact    1020

ttgggggttcg gcctgtgtcc cccgaacgct ctgcaccttc tgacgcagcc tgagaatgac    1080

ctgccctggc cccagcccta ctctgtgtaa tagaataaag gcctgcgtgt gtctgtgttg    1140

agcgtgcgtc tgtgtgtgcc tgtgtgcgag tctgagtcag agatttggag atgtctctgt     1200

gtgtttgtgt gtatctgtgg gtctccatcc tccatggggg ctcagccagg tgctgtgaca    1260

cccccccttct gaatgaagcc ttctgacctg ggctggcact gctgggggtg aggacacatt    1320

gccccatgag acagtcccag aacacggcag ctgctggctg tgacaatggt ttcaccatcc    1380
```

```
ttagaccaag ggatgggacc tgatgacctg ggaggactct tttagttctt acctcttgtg   1440

gttctcaata aaacagaacg                                                1460
```

```
<210>  13
<211>  1403
<212>  DNA
<213>  human

<400>  13
gcttccgctt tggggtggtg gtgccacccg ccgtggccgg cgcccggccg gagctgctgg    60

tggtggggtc gcggcccgag ctggggcgtt gggagccgcg cggtgccgtc cgcctgaggc   120

cggccggcac cgcggcgggc gacggggccc tggcgctgca ggagccgggc ctgtggctcg   180

gggaggtgga gctggcggcc gaggaggcgg cgcaggacgg ggcggagccg gccgcgtgg    240

acacgttctg gtacaagttc ctgaagcggg agccgggagg agagctctcc tgggaaggca   300

atggacctca tcatgaccgt tgctgtactt acaatgaaaa caacttggtg gatggtgtgt   360

attgtctccc aataggacac tggattgagg ccactgggca caccaatgaa atgaagcaca   420

caacagactt ctattttaat attgcaggcc accaagccat gcattattca aggccgagta   480

cagatgctgc cccaggcggt gtgcctgctg catgcgctgc tggagaaggg acacatcgtg   540

tacgtgcact gcaacgctgg ggtgggccgc tccaccgcgg ctgtctgcgg ctggctccag   600

tatgtgatgg gctggaatct gaggaaggtg cagtatttcc tcatggccaa gaggccggct   660

gtctacattg acgaagaggc cttggcccgg gcacaagaag attttttcca gaaatttggg   720

aaggttcgtt cttctgtgtg tagcctgtag ctggtcagcc tgcttctgcc ccctcctgat   780

ttccctaagg agcctgggat gatgttggtc aaatgaccta gaaacaagga ttctacctga   840

actgaaagga ctgtgtgacc tcccccaagc caaccacttt cacctgggat gactttcgat   900

tatgctttgt tttggggctg tatttttgaa atactctaca agaaagctgt ggctcaacac   960

atgagaagaa gcacgaagca gttaggctgt acatcagaca gaagggtaat gcgtgcagtt  1020

cctgctgcct gcaggcagac gaggcctttg ctttacagca ctgtatgtgt tgcacgatgg  1080

atccgtgaca gcactttcct gttgcactga aactcttggc catgtagagg aaaagatatg  1140

gagttatgtg gatttcatca ctagtatgtg tgcgtgagct ggtcagttgc caaaggagga  1200

aataaggtta gaagcctgaa ccgttacaaa agaagagctc actatggtca aaaagtgatg  1260

gctttcagga cttgtttttt atcctgcctc acagttgtta aagtctgttc caaggcatca  1320

ccttccttct ctacccaaca accctgtgta acaactaaag tagaattatc tccaaaaaaa  1380

aaaaaaaaaa aaaaaaaaaa aaa                                          1403
```

```
<210>  14
<211>  3463
```

<212> DNA
<213> human

<400> 14

```
atggctgagc cgactagtga tttcgagact cctatcgggt ggcatgcgtc tcccgagctg      60
actcccacgt tagggcccct gagcgacact gccccgccgc gggacaggtg gatgttctgg     120
gcaatgctgc cgccaccgcc accaccactt acgtcctcgc ttcccgcagc cgggtcaaag     180
ccttcctctg agtcgcagcc ccccatggag gcccagtctc tccccggggc tccgcccccc     240
ttcgacgccc agattcttcc cggggcgcaa ccccccttcg acgcccagtc tcccttgat     300
tctcagcctc aacccagcgg ccagccttgg aatttccatg cttccacatc gtggtattgg     360
agacagtctt ctgataggtt tcctcggcat cagaagtcct tcaaccctgc agttaaaaat     420
tcttattatc acgaaagta tgatgcaaaa ttcacagact tcagcttacc tcccagtaga     480
aaacagaaaa aaaagaaaag aaaggaacca gttttcact tttttgtga tacctgtgat     540
cgtggtttta aaatcaaga aaagtatgac aaacacatgt ctgaacatac aaaatgccct     600
gaattagatt gctcttttac tgcacacgag aagattgtcc agttccattg gagaaatatg     660
catgctcctg gcatgaagaa gatcaagtta gacactccag aggaaattgc acggtggagg     720
gaagaaagaa ggaaaaacta tccaactctg gccaatattg aaaggaagaa gaagttaaaa     780
cttgaaaagg agaagagagg agcagtattg acaacaacac aatatggcaa gatgaagggg     840
atgtccagac attcacaaat ggcaaagatc agaagtcctg gcaagaatca caaatggaaa     900
aacgacaatt ctagacagag agcagtcact ggatcaggca gtcacttgtg tgatttgaag     960
ctagaaggtc caccggaggc aaatgcagat cctcttggtg ttttgataaa cagtgattct    1020
gagtctgata aggaggagaa accacaacat tctgtgatac ccaaggaagt gacaccagcc    1080
ctatgctcac taatgagtag ctatggcagt cttcagggt cagagagtga gccagaagaa    1140
actcccatca agactgaagc agacgttttg gcagaaaacc aggttcttga tagcagtgct    1200
cctaagagtc caagtcaaga tgttaaagca actgttagaa attttcaga gccaagagt    1260
gagaaccgaa agaaaagctt tgaaaaaaca aaccctaaga ggaaaaaaga ttatcacaac    1320
tatcaaacgt tattcgaacc aagaacacac catccatatc tcttggaaat gcttctagct    1380
ccggacattc gacatgaaag aaatgtgatt ttgcagtgtg ttcggtacat cattaaaaaa    1440
gactttttg gactggatac taattctgcg aaaagtaaag atgtataggc atctggtgtt    1500
tcagcataca taactgaagc atgtgaaaca gtatcatcct cgttagtaga ggaaaaccaa    1560
aacccttttt tccgtcaaaa ttggatttgt aattaaattg taagcctcgt aggatgtatg    1620
ttggaatttt aagtctttcc tttggttcta tgcaaataaa aaaataactg attttttaag    1680
actgtgtctg tattgttggg attgaatcta gtatttgctg ggagaatttt ttctttgtat    1740
ttattttaat gtattgttct catgtaagaa tgactgatgt tgtgttagtt aagaattgaa    1800
```

```
gataggttta gcagtaaaga agaaagcttt taaaaggatt gattcagcta agcaaagttg   1860

ggcagagaaa tacagccatt ttgttttttaa tgcagaaaag gaagatgttc tgtagcaagg   1920

gggaatattt taaaaataaa ccagatcaaa ttaatacaat cagaaggttt cgaaatgtaa   1980

atattcctta tttaagacat gtttaaattc acctactagc acgacttaca tagctcaaat   2040

attgaatgtt taaaatatta atacagatgg ggcctcttta tgtttagata aaattgaagt   2100

acttaattga agcttttttaa aaattgtaaa gtaaatgaaa gctattgaga tcttttttgtc   2160

tcctataata ccagggaatt tgagcttgtg ttctagtcat tgtactagct gtagctattg   2220

gtctgtcctt ttgacataca gctaaaaggg actaaatttg taaaaaatta gtttgttata   2280

gttgaagatt aactttttcct aacattgtga ttattgaagt tcatgaatct tgctgtcaag   2340

gaagaaaggt aagaaagctg atagctcctc catgttggta aaatcctctc cagaatcttg   2400

gaacacctgg catgtgaccc tagtgacgtc acagacctga gatgaagatt catgtttagc   2460

cagtgttttc cagccttgta cccaccatac agatctgttt attctgtttc accctactcc   2520

tccagtgagc cccatatttt gggaaattat ctgccttata cattaactaa ttcaattcat   2580

gtaacactgt tgagtgctta ctctttgtac ctctattgtg cctatattaa aggtatacaa   2640

ataaataagg ccatgtctga cttcaaggaa ctcagttttaa ttttgatata ttcaaagatg   2700

tgattcccaa ccaactcagg atgaagtaac tagtgttaca actgagttga tattctaaaa   2760

tataacccag tttgtacttt tattactagt tagcatacac attttatggc ttatgggtta   2820

ataaatgaat tcatggactc ctggactact ttcattgatg accatatctc cagggatgtt   2880

gttgatcccc acactgcctt aaggtatatt atagaaacag ttttattttc cattttttctt   2940

gtttcctgat aataaatgta tttaggactg aaaatactcc tgagtactcc cctggctgta   3000

tgtctgacag tctttagcta tggtgactat tgtttatttt taatgggtat ttcagattcc   3060

aagtgtattt aaaatttcta aggagatata atatagcctg tatggtttct actttatgga   3120

attatatggt caatatttgt aaatattcta tgagttttgg gtgggtagag gggtgctttg   3180

cctgttttgg gtacaggttt ttttggattt agcttgttaa ttgttcaaac tttctgcctt   3240

ctacattcct atcttattgt tcgtttaatc agtttctgaa atgtaagcat tacatgacta   3300

ttggtgagtt gtgcctttta taactgaaat actttacttt ttctcatatc ctctataatt   3360

gacttctatt ttccttaatc aaaccagctc tgggaaattt aatacattta tattaattga   3420

gattattaaa acatttggac tattaaaaaa aaaaaaaaaa aaa                      3463
```

<210> 15
<211> 5115
<212> DNA
<213> human

<400> 15

```
gaattccggg agcgggcggg ctgcgaggcc gcggggcatg cgggaggcgg aggggtgggga      60
ccgggtggct gcgcccattc cacacccgcc gaaagcggac actgtcagct gaatcactcc     120
ccttttagga ggagggaggg ggaaaaggtg tctagctaat ttctgcttaa aaaagcacag     180
gagatcgcgg gtcagctttg cagtcgctgc cttctcgcgc ctgaccatgc acccctgcat     240
cttcctgctg ggcacaggcg agcgctttat ttctggagct gagggctaaa acttttttca     300
cttttcttct cctcaacatc tgaatcatgc catgtgccca gaggagctgg cttgcaaacc     360
tttccgtggt ggctcagctc cttaactttg gggcgctttg ctatgggaga cagcctcagc     420
caggcccggt tcgcttcccg gacaggaggc aagagcattt tatcaagggc ctgccagaat     480
accacgtggt gggtccagtc cgagtagatg ccagtgggca tttttttgtca tatggcttgc     540
actatcccat cacgagcagc aggaggaaga gagatttgga tggctcagag gactgggtgt     600
actacagaat ttctcacgag gagaaggacc tgttttttaa cttgacggtc aatcaaggat     660
ttcttttccaa tagctacatc atggagaaga gatatgggaa cctctcccat gttaagatga     720
tggcttcctc tgcccccctc tgccatctca gtggcacggt tctacagcag ggcaccagag     780
ttgggacggc agccctcagt gcctgccatg gactgactgg attttttccaa ctaccacatg     840
gagacttttt cattgaaccc gtgaagaagc atccactggt tgagggaggg taccacccgc     900
acatcgttta caggaggcag aaagttccag aaaccaagga gccaacctgt ggattaaagg     960
acagtgttaa catctcccag aagcaagagc tatggcggga gaagtgggag aggcacaact    1020
tgccaagcag aagcctctct cggcgttcca tcagcaagga gagatgggtg gagacactgg    1080
tggtggccga cacaaagatg attgaatacc atgggagtga gaatgtggag tcctacatcc    1140
tcaccatcat gaacatggtc actgggttgt tccataaccc aagcattggc aatgcaattc    1200
acattgttgt ggttcggctc attctactcg aagaagaaga gcaaggactg aaaatagttc    1260
accatgcaga aaagacactg tctagcttct gcaagtggca gaagagtatc aatcccaaga    1320
gtgacctcaa tcctgttcat cacgacgtgg ctgtccttct caccagaaag gacatctgtg    1380
ctggtttcaa tcgcccctgc gagaccctgg gcctgtctca cctttcagga atgtgtcagc    1440
ctcaccgcag ttgtaacatc aatgaagatt cgggactccc tctggctttc acaattgccc    1500
atgagctagg acacagcttc ggcatccagc atgatgggaa agaaaatgac tgtgagcctg    1560
tgggcagaca tccgtacatc atgtcccgcc agctccagta cgatcccact ccgctgacat    1620
ggtccaagtg cagcgaggag tacatcaccc gcttcttgga ccgaggctgg gggttctgtc    1680
ttgatgacat acctaaaaag aaaggcttga agtccaaggt cattgccccc ggagtgatct    1740
atgatgttca ccaccagtgc cagctacaat atggacccaa tgctaccttc tgccaggaag    1800
tagaaaacgt ctgccagaca ctgtggtgct ccgtgaaggg ctttttgtcgc tctaagctgg    1860
```

```
acgctgctgc agatggaact caatgtggtg agaagaagtg gtgtatggca ggcaagtgca   1920

tcacagtggg gaagaaacca gagagcattc ctggaggctg gggccgctgg tcaccctggt   1980

cccactgttc caggacctgt ggggctggag tccagagcgc agagaggctc tgcaacaacc   2040

ccgagccaaa gtttggaggg aaatattgca ctggagaaag aaaacgctat cgcttgtgca   2100

acgtccaccc ctgtcgctca gaggcaccaa catttcggca gatgcagtgc agtgaatttg   2160

acactgttcc ctacaagaat gaactctacc actggtttcc cattttttaac ccagcacatc   2220

cttgtgagct ctactgccga cccatagatg gccagttttc tgagaaaatg ctggatgctg   2280

tcattgatgg tacccccttgc tttgaaggcg gcaacagcag aaatgtctgt attaatggca   2340

tatgtaagat ggttggctgt gactatgaga tcgattccaa tgccaccgag gatcgctgcg   2400

gtgtgtgcct gggagatggc tcttcctgcc agactgtgag aaagatgttt aagcagaagg   2460

aaggatctgg ttatgttgac attgggctca ttccaaaagg agcaagggac ataagagtga   2520

tggaaattga gggagctgga aacttcctgg ccatcaggag tgaagatcct gaaaaatatt   2580

acctgaatgg agggtttatt atccagtgga acgggaacta taagctggca gggactgtct   2640

ttcagtatga caggaaagga gacctggaaa agctgatggc cacaggtccc accaatgagt   2700

ctgtgtggat ccagcttcta ttccaggtga ctaaccctgg catcaagtat gagtacacaa   2760

tccagaaaga tggccttgac aatgatgttg agcagatgta cttctggcag tacggccact   2820

ggacagagtg cagtgtgacc tgcgggacag gtatccgccg ccaaactgcc cattgcataa   2880

agaagggccg cgggatggtg aaagctacat tctgtgaccc agaaacacag cccaatggga   2940

gacagaagaa gtgccatgaa aaggcttgtc cacccaggtg gtgggcaggg gagtgggaag   3000

catgctcggc gacatgcggg ccccacgggg agaagaagcg aaccgtgctg tgcatccaga   3060

ccatggtctc tgacgagcag gctctcccgc ccacagactg ccagcacctg ctgaagccca   3120

agaccctcct ttcctgcaac agagacatcc tgtgcccctc ggactggaca gtgggcaact   3180

ggagtgagtg ttctgttttcc tgtggtggtg gagtgcggat tcgcagtgtc acatgtgcca   3240

agaaccatga tgaaccttgc gatgtgacaa ggaaacccaa cagccgagct ctgtgtggcc   3300

tccagcaatg ccccttctagc cggagagttc tgaaaccaaa caaaggcact atttccaatg   3360

gaaaaaaccc accaacacta aagcccgtcc ctccacctac atccaggccc agaatgctga   3420

ccacacccac agggcctgag tctatgagca caagcactcc agcaatcagc agccctagtc   3480

ctaccacagc ctccaaagaa ggagacctgg gtgggaaaca gtggcaagat agctcaaccc   3540

aacctgagct gagctctcgc tatctcatttt ccactggaag cacttcccag cccatcctca   3600

cttcccaatc cttgagcatt cagccaagtg aggaaaatgt ttccagttca gatactggtc   3660

ctacctcgga gggaggcctt gtagctacaa caacaagtgg ttctggcttg tcatcttccc   3720

gcaaccctat cacttggcct gtgactccat tttacaatac cttgaccaaa ggtccagaaa   3780
```

```
tggagattca cagtggctca ggggaagaaa gagaacagcc tgaggacaaa gatgaaagca    3840

atcctgtaat atggaccaag atcagagtac ctggaaatga cgctccagtg gaaagtacag    3900

aaatgccact tgcacctcca ctaacaccag atctcagcag ggagtcctgg tggccaccct    3960

tcagcacagt aatggaagga ctgctcccca gccaaaggcc cactacttcc gaaactggga    4020

cacccagagt tgaggggatg gttactgaaa agccagccaa cactctgctc cctctgggag    4080

gagaccacca gccagaaccc tcaggaaaga cggcaaaccg taaccacctg aaacttccaa    4140

acaacatgaa ccaaacaaaa agttctgaac cagtcctgac tgaggaggat gcaacaagtc    4200

tgattactga gggcttttтg ctaaatgcct ccaattacaa gcagctcaca aacggccacg    4260

gctctgcaca ctggatcgtc ggaaactgga gcgagtgctc caccacatgt ggcctggggg    4320

cctactggaa aagggtggag tgcaccaccc agatggattc tgactgtgcg ccatccaga    4380

gacctgaccc tgcaaaaaga tgccacctcc gtccctgtgc tggctggaaa gtgggaaact    4440

ggagcaagtg ctccagaaac tgcagtgggg gcttcaagat acgcgagatt cagtgcgtgg    4500

acagccggga ccaccggaac ctgaggccat ttcactgcca gttcctggcc ggcattcctc    4560

ccccattgag catgagctgt aacccggagc cctgtgaggc gtggcaggtg gagccttgga    4620

gccagtgctc caggtcctgt ggaggtggag ttcaggagag aggagtgttc tgtccaggag    4680

gcctctgtga ttggacaaaa agacccacat ccaccatgtc ttgcaatgag cacctgtgct    4740

gtcactgggc cactgggaac tgggacctgt gttccacttc ctgtggaggt ggctttcaga    4800

agaggattgt ccaatgtgtg ccctcagagg gcaataaaac tgaagaccaa gaccaatgtc    4860

tatgtgatca caaacccaga cctccagaat tcaaaaaatg caaccagcag gcctgcaaga    4920

aaagtgccga tttactttgc actaaggaca aactgtcagc cagtttctgc cagacactga    4980

aagccatgaa gaaatgttct gtgcccaccg tgagggctga gtgctgcttc tcgtgtcccc    5040

agacacacat cacacacacc caaaggcaaa gaaggcaacg gttgctccaa aagtcaaaag    5100

aactctaagc ccaaa                                                     5115
```

<210> 16
<211> 528
<212> DNA
<213> human

<400> 16
```
cgccagggag ctgtgaggca gtgctgtgtg gttcctgccg tccggactct ttttcctcta     60

ctgagattca tctgtgtgaa atatgagttg gcgaggaaga tcgacctatt attggcctag    120

accaaggcgc tatgtacagc ctcctgaaat gattgggcct atgcggcccg agcagttcag    180

tgatgaagtg gaaccagcaa cacctgaaga aggggaacca gcaactcaac gtcaggatcc    240

tgcagctgct caggagggag aggatgaggg agcatctgca ggtcaagggc cgaagcctga    300
```

agctgatagc caggaacagg gtcacccaca gactgggtgt gagtgtgaag atggtcctga 360

tgggcaggag atggacccgc caaatccaga ggaggtgaaa acgcctgaag aaggtgaaaa 420

gcaatcacag tgttaaaaga aggcacgttg aaatgatgca ggctgctcct atgttggaaa 480

tttgttcatt aaaattctcc caataaagct ttacagcctt ctgcaaaa 528

<210> 17
<211> 2247
<212> DNA
<213> human

<400> 17
tttcttgagc taggaaaggt ggttggctta cggcacagta gagagcttcc agggctggct 60

ggcgtgggat acccgtacca cagaaatgca gggaccattg cttcttccag gcctctgctt 120

tctgctgagc ctctttggag ctgtgactca gaaaaccaaa acttcctgtg ctaagtgccc 180

cccaaatgct tcctgtgtca ataacactca ctgcacctgc aaccatggat atacttctgg 240

atctgggcag aaactattca cattcccctt ggagacatgt aacgacatta tgaatgtac 300

accaccctat agtgtatatt gtggatttaa cgctgtgtgt tacaatgtcg aaggaagttt 360

ctactgtcaa tgtgtcccag gatatagact gcattctggg aatgaacaat tcagtaattc 420

caatgagaac acctgtcagg acaccacctc ctcaaagaca accgagggca ggaaagagct 480

gcaaaagatt gtggacaaat ttgagtcact tctcaccaat cagactttat ggagaacaga 540

agggagacaa gaaatctcat ccacagctac cactattctc cgggatgtgg aatcgaaagt 600

tctagaaact gccttgaaag atccagaaca aaaagtcctg aaaatccaaa acgatagtgt 660

agctattgaa actcaagcga ttacagacaa ttgctctgaa gaaagaaaga cattcaactt 720

gaacgtccaa atgaactcaa tggacatccg ttgcagtgac atcatccagg agacacaca 780

aggtcccagt gccattgcct ttatctcata ttcttctctt ggaaacatca taaatgcaac 840

ttttttgaa gagatggata agaaagatca agtgtatctg aactctcagg ttgtgagtgc 900

tgctattgga cccaaaagga cgtgtctct ctccaagtct gtgacgctga cttttccagca 960

cgtgaagatg accccagta ccaaaaaggt cttctgtgtc tactggaaga gcacagggca 1020

gggcagccag tggtccaggg atggctgctt cctgatacac gtgaacaaga gtcacaccat 1080

gtgtaattgc agtcacctgt ccagcttcgc tgtcctgatg gccctgacca gccaggagga 1140

ggatcccgtg ctgactgtca tcacctacgt ggggctgagc gtctctctgc tgtgcctcct 1200

cctggcggcc ctcacttttc tcctgtgtaa agccatccag aacaccagca cctcactgca 1260

tctgcagctc tcgctctgcc tcttcctggc ccacctcctc ttcctcgtgg ggattgatcg 1320

aactgaaccc aaggtgctgt gctccatcat cgccggtgct ttgcactatc tctacctggc 1380

cgccttcacc tggatgctgc tggagggtgt gcacctcttc ctcactgcac ggaacctgac 1440

Page 20

```
agtggtcaac tactcaagca tcaatagact catgaagtgg atcatgttcc cagtcggcta   1500

tggcgttccc gctgtgactg tggccatttc tgcagcctcc tggcctcacc tttatggaac   1560

tgctgatcga tgctggctcc acctggacca gggattcatg tggagtttcc ttggcccagt   1620

ctgtgccatt ttctctgcga atttagtatt gtttatcttg gtcttttgga ttttgaaaag   1680

aaaactttcc tccctcaata gtgaagtgtc aaccatccag aacacaagga tgctggcttt   1740

caaagcaaca gctcagctct tcatcctggg ctgcacatgg tgtctgggct tgctacaggt   1800

gggtccagct gcccaggtca tggcctacct cttcaccatc atcaacagcc tccaaggctt   1860

cttcatcttc ttggtctact gcctcctcag ccagcaggtc cagaaacaat atcaaaagtg   1920

gtttagagag atcgtaaaat caaaatctga gtctgagaca tacacacttt ccagcaagat   1980

gggtcctgac tcaaaaccca gtgaggggga tgttttttcca ggacaagtga agagaaaata  2040

ttaaaactag aatattcaac tccatatgga aaatcatatc catggatctc tttggcatta   2100

tgaagaatga agctaaggaa aagggaattc attaaacata tcatccttgg agaggaagta   2160

atcaaccttt acttcccaag ctgtttgttc tccacaatag gctctcaaca aatgtgtggt   2220

aaattgcatt tctcttcaaa aaaaaaa                                       2247
```

```
<210>  18
<211>  1325
<212>  DNA
<213>  human

<400>  18
accaatcctc acctctcacc tctgtgtccg ccctgctggg aaatattcca ggctttggcc     60

aaggccagtg cagcccccagg ttcccgagcg gcaggttggg tgcggaccat ggcctctcac    120

aagctgctgg tgacccccccc caaggccctg ctcaagcccc tctccatccc caaccagctc   180

ctgctggggc ctggtccttc caacctgcct cctcgcatca tggcagccgg ggggctgcag   240

atgatcgggt ccatgagcaa ggatatgtac cagatcatgg acgagatcaa ggaaggcatc   300

cagtacgtgt tccagaccag gaacccactc acactggtca tctctggctc gggacactgt    360

gccctggagg ccgccctggt caatgtgctg gagcctgggg actccttcct ggttggggcc    420

aatggcattt gggggcagcg agccgtggac atcggggagc gcataggagc ccgagtgcac    480

ccgatgacca aggaccctgg aggccactac acactgcagg aggtggagga gggcctggcc    540

cagcacaagc cagtgctgct gttcttaacc cacggggagt cgtccaccgg cgtgctgcag    600

ccccttgatg gcttcgggga actctgccac aggtacaagt gcctgctcct ggtggattcg    660

gtggcattcc tgggcgggac cccccctttac atggaccggc aaggcatcga catcctgtac    720

tcgggctccc agaaggcccт gaacgcccct ccagggacct cgctcatctc cttcagtgac    780

aaggccaaaa agaagatgta ctcccgcaag acgaagccct tctccttcta cctggacatc   840
```

```
aagtggctgg ccaacttctg gggctgtgac gaccagccca ggatgtacca tcacacaatc      900

cccgtcatca gcctgtacag cctgagagag agcctggccc tcattgcgga acagggcctg      960

gagaacagct ggcgccagca ccgcgaggcc gcggcgtatc tgcatgggcg cctgcaggca     1020

ctggggctgc agctcttcgt gaaggacccg gcgctccggc ttcccacagt caccactgtg     1080

gctgtacccg ctggctatga ctggagagac atcgtcagct acgtcataga ccacttcgac     1140

attgagatca tgggtggcct tgggcccctcc acggggaagg tgctgcggat cggcctgctg     1200

ggctgcaatg ccacccgcga gaatgtggac cgcgtgacgg aggccctgag ggcggccctg     1260

cagcactgcc ccaagaagaa gctgtgacct gcccactggc acacagctgg cactggcaca     1320

cacct                                                                  1325
```

<210> 19
<211> 2263
<212> DNA
<213> human

<400> 19
```
agccagaggg acgagctagc ccgacgatgg cccaggggac attgatccgt gtgaccccag       60

agcagcccac ccatgccgtg tgtgtgctgg gcaccttgac tcagcttgac atctgcagct      120

ctgcccctga ggactgcacg tccttcagca tcaacgcctc cccaggggtg gtcgtggata      180

ttgcccacag ccctccagcc aagaagaaat ccacaggttc ctccacatgg cccctggacc      240

ctggggtaga ggtgaccctg acgatgaaag cggccagtgg tagcacaggc gaccagaagg      300

ttcagatttc atactacgga cccaagactc caccagtcaa agctctactc tacctcaccg      360

cggtggaaat ctccctgtgc gcagacatca cccgcaccgg caaagtgaag ccaaccagag      420

ctgtgaaaga tcagaggacc tggacctggg gcccttgtgg acagggtgcc atcctgctgg      480

tgaactgtga cagagacaat ctcgaatctt ctgccatgga ctgcgaggat gatgaagtgc      540

ttgacagcga agacctgcag gacatgtcgc tgatgaccct gagcacgaag acccccaagg      600

acttcttcac aaaccataca ctggtgctcc acgtggccag gtctgagatg gacaaagtga      660

gggtgtttca ggccacacgg ggcaaactgt cctccaagtg cagcgtagtc ttgggtccca      720

agtggccctc tcactacctg atggtccccg gtggaaagca caacatggac ttctacgtgg      780

aggccctcgc tttcccggac accgacttcc cggggctcat tacccctcacc atctccctgc      840

tggacacgtc caacctggag ctccccgagg ctgtggtgtt ccaagacagc gtggtcttcc      900

gcgtggcgcc ctggatcatg acccccaaca cccagccccc gcaggaggtg tacgcgtgca      960

gtattttga aaatgaggac ttcctgaagt cagtgactac tctggccatg aaagccaagt     1020

gcaagctgac catctgccct gaggaggaga acatggatga ccagtggatg caggatgaaa     1080

tggagatcgg ctacatccaa gccccacaca aaacgctgcc cgtggtcttc gactctccaa     1140
```

```
ggaacagagg cctgaaggag tttcccatca aacgagtgat gggtccagat tttggctatg   1200

taactcgagg gccccaaaca gggggtatca gtggactgga ctcctttggg aacctggaag   1260

tgagccccc  agtcacagtc aggggcaagg aatacccgct gggcaggatt ctcttcgggg   1320

acagctgtta tcccagcaat gacagccggc agatgcacca ggccctgcag gacttcctca   1380

gtgcccagca ggtgcaggcc cctgtgaagc tctattctga ctggctgtcc gtgggccacg   1440

tggacgagtt cctgagcttt gtgccagcac ccgacaggaa gggcttccgg ctgctcctgg   1500

ccagccccag gtcctgctac aaactgttcc aggagcagca gaatgagggc cacggggagg   1560

ccctgctgtt cgaagggatc aagaaaaaaa aacagcagaa aataaagaac attctgtcaa   1620

acaagacatt gagagaacat aattcatttg tggagagatg catcgactgg aaccgcgagc   1680

tgctgaagcg ggagctgggc ctggccgaga gtgacatcat tgacatcccg cagctcttca   1740

agctcaaaga gttctctaag gcggaagctt ttttccccaa catggtgaac atgctggtgc   1800

tagggaagca cctgggcatc cccaagccct tcgggcccgt catcaacggc cgctgctgcc   1860

tggaggagaa ggtgtgttcc ctgctggagc cactgggcct ccagtgcacc ttcatcaacg   1920

acttcttcac ctaccacatc aggcatgggg aggtgcactg cggcaccaac gtgcgcagaa   1980

agcccttctc cttcaagtgg tggaacatgg tgccctgagc ccatcttccc tggcgtcctc   2040

tccctcctgg ccagatgtcg ctgggtcctc tgcagtgtgg caagcaagag ctcttgtgaa   2100

tattgtggct ccctgggggc ggccagccct cccagcagtg gcttgctttc ttctcctgtg   2160

atgtcccagt ttcccactct gaagatccca acatggtcct agcactgcac actcagttct   2220

gctctaagaa gctgcaataa agttttttta agtcactttg tac                      2263
```

```
<210>   20
<211>   2772
<212>   DNA
<213>   human
```

```
<400>   20
cagtcggcac cggcgaggcc gtgctggaac ccgggcctca gccgcagccg cagcggggcc      60

gacatgacga cagctccca  ggagcccccc gcccggcccc tccaggcggg cagtggagct     120

ggcccggcgc ctgggcgcgc catgcgcagc accacgctcc tggccctgct ggcgctggtc     180

ttgctttact tggtgtctgg tgccctggtg ttccgggccc tggagcagcc ccacgagcag     240

caggcccaga gggagctggg ggaggtccga gagaagttcc tgagggccca tccgtgtgtg     300

agcgaccagg agctgggcct cctcatcaag gaggtggctg atgccctggg aggggggtgcg     360

gacccagaaa ccaactcgac cagcaacagc agccactcag cctgggacct gggcagcgcc     420

ttcttttttct cagggaccat catcaccacc atcggctatg caatgtggc  cctgcgcaca     480

gatgccgggc gcctcttctg catcttttat gcgctggtgg ggattccgct gtttgggatc     540
```

```
ctactggcag gggtcgggga ccggctgggc tcctccctgc gccatggcat cggtcacatt    600

gaagccatct tcttgaagtg gcacgtgcca ccggagctag taagagtgct gtcggcgatg    660

cttttcctgc tgatcggctg cctgctcttt gtcctcacgc ccacgttcgt gttctgctat    720

atggaggact ggagcaagct ggaggccatc tactttgtca tagtgacgct taccaccgtg    780

ggctttggcg actatgtggc cggcgcggac cccaggcagg actccccggc ctatcagccg    840

ctggtgtggt tctggatcct gctcggcctg gcttacttcg cctcagtgct caccaccatc    900

gggaactggc tgcgagtagt gtcccgccgc actcgggcag agatgggcgg cctcacggct    960

caggctgcca gctggactgg cacagtgaca gcgcgcgtga cccagcgagc cgggcccgcc   1020

gccccgccgc cggagaagga gcagccactg ctgcctccac cgccctgtcc agcgcagccg   1080

ctgggcaggc cccgatcccc ttcgccccct gagaaggctc agccgccttc cccgcccacg   1140

gcctcggccc tggattatcc cagcgagaac ctggccttca tcgacgagtc ctcggatacg   1200

cagagcgagc gcggctgccc gctgccccgc gcgccgagag gtcgccgccg cccaaatccc   1260

cccaggaagc ccgtgcggcc ccgcggcccc gggcgtcccc gagacaaagg cgtgccggtg   1320

tagggggcagg atccctggcc gggcctctca agggcttcgt ttctgctctc cccggcatgc   1380

ctggcttgtt tgaccaaaga gccctctttc cacgagactg aagtctgggg aggaggctac   1440

agttgcctct ccgcctcctc cctggccccg gcccttccct cacttccatc catctctaga   1500

cccccccaag gctttctgtg tcgctgcccc gggcgggtgt atccctcaca gcacctcacg   1560

actgtgcctc aaagcctgca tcaataaatg aaaacggtct gcaccgctgc gggcgtgacg   1620

ctcccggacg cgagtgggtg tggaattgct ttcctcgggc caccgtgggg gcacctctgg   1680

cctcccgtga cccccaggcc gagggtcccc gggcacccag gtcggtcaag tctcggccct   1740

ctcaggcccg cgtctctgcc tggaggagac tgtgtagggt ccggcgtggg gatcagccgg   1800

gatgggctgc gcgtctccag cctctgcaca cacattggcg ggtggggtgc agggaggggag   1860

aggcaggggga gagagaatgg catctcgcgt ggagggctgt cgtttgaact ctcccagcgc   1920

gagagaccct gccccgcccc cttcctggag cgttgactcc cttctcgtct cgaggcctgt   1980

ggcgtctggg tccgttgggg cagaaccatg gaggaaaagc cttcgaaagt gtcgctcaag   2040

tcttccgacc gccaaggctc ggacgaggag agcgtgcata gcgacactcg ggacctgtgg   2100

accacgacca cgctgtccca ggcacagctg aacatgccgc tgtccgaggt ctgcgagggc   2160

ttcgacgagg agggccgcaa cattagcaag acccgcgggt ggcacagccc ggggcggggc   2220

tcgttggacg aggggtacaa ggccagccac aagccggagg aactggacga gcacgcgctg   2280

gtggagctgg agttgcaccg cggcagctcc atggaaatca atctgggggga gaaggacact   2340

gcatcccaga tcgaggccga aaagtcttcc tcaatgtcat cactcaatat tgcgaagcac   2400
```

```
atgccccatc gagcctactg ggcagagcag cagagcaggc tgccactgcc cctgatggaa    2460

ctcatggaga atgaagctct ggaaatcctc accaaagccc tccggagcta ccagttaggg    2520

atcggcaggg accacttcct gactaaggag ctgcagcgat acatcgaagg gctcaagaag    2580

cgccggagca agaggctgta cgtgaattaa aaacgccacc ttgggctcga gcagcgaccc    2640

gaaccagccc cgtgccagcc cggtccccag acccaagcct gaccccatcc gagtggaatt    2700

tgagtcctaa agaaataaaa gagtcgatgc atgaaaaaaa aaaaaaaaaa aaaaaaaaaa    2760

aaaaaaaaaa aa                                                       2772
```

<210> 21
<211> 7909
<212> DNA
<213> human

<400> 21

```
ttcaagtatg gcagacaaag gatgttctgc gtggggaaat gtggtgacac ccatttcaca      60

aggacagctc acatagattg agtgctcagg aaggaccagc accatacgca gtgcctgatg     120

tgtatcatct caattagtcc ttgcctcaga tgcaaaagga aaccatcgcc atcatcatca     180

ccaccatcat catcttcctc ctgtgcagat ggaaaggctg aggcatagag aggtgacgga     240

gtctgcccag gactgcaagc ctgctggtgg cagagccagg ttccaatgga atgaaggctg     300

tcatcctcag atggcagggt aggcaggtgg ctagagctca cttgggagaa ggggaaagga     360

cactgacttt ggctagggat ggagcagagc ttgggctggc tttccatgca cgggcagggg     420

gcgtggctca tggctacgct ccagccccgg gtgtggacat tgaatcttcc aggtctaccc     480

taggctatgg gtctggacag cactgtgatg gaaagaagac actctatgtc ctgcattctg     540

tgaccaatga tgtgactgtg ggaatggcgc tggcatctgg ctgccactct gggacgggtg     600

gccagctgcc atcaggcccc acccaggatg ggaccaccat gcgacttctt ccctcgctcc     660

tcctggtcat gtccagagcc ccaggaggac cagcaaagcc tctcgagccg atggcagctc     720

acgttctgcc ttgtcagcta ctcctctcct gggcaatatt ggctgcttgc tgtggctctc     780

cccgggggtat gtgactgcct ctgtgctggg cacctggcct gggctttcct tctgggcctg     840

ggcagctggg ctcagcttgg acccaggcag cagccacaga ggggcccatg gaggtgacag     900

agttgcttct atgatggtga cgggcagct gtgacacgga ggaggcgacc actcctcagt     960

ttccaagtgc tgcggtcagg gccggggcca gcaaagtccc tcccatattc aaagagcggg    1020

tttgggtttg tcccaggagg acatagtcag gagcccatgc tgggacatgc ctcctccaaa    1080

gttcagcctg gatccccagc ctctgccaac ggccccgctc cttagctaac ccagcttgct    1140

cctgggttcc acggcggagt cagatgtttc tgggcagttt cacctttgtg ccttaaatgc    1200

atgttgagga ctttaaggaa ttgtggagaa atagggctgt ggcaaaggca agtgacaact    1260
```

```
gggaacaatg atcccgcaga ggctgctgag gcctgggccc caggggcgtg ggttcatcct   1320

tctgcctggg ctttggtggg aggggcagac tctgtggtct gagacacaaa aaaacccaaa   1380

acatatgtgt gtacagacac acagcagagc cacacacaca cttgtgccca tgcacacact   1440

cacaggaggc ccgtggactc cgcacaggga agaaactcct ccggtcgaca gtggacggcg   1500

ctgcagcagg gactcacccc caagccctgc ctgcctccca ttgcccacct ggccctggct   1560

tgatgggctt atctcatgct gtggccgggg acctcttgct tcctgcaacc ccttgctgga   1620

ctggggcctg ggcctctcct gggctgtgcc tagggtttgt aacccagggc ctgtgccggc   1680

gtgcacagag catctctccc tgggaggctc agggctgcct cctcgagctc tgtgggcctg   1740

cactggccgg tgagcttgtg gtgtgggttt tcaggctgta tccttctacc tcctgagccc   1800

aggggtccca ggcgccctgc agctgtctcc tcggccatcc tgtggggccc cgaggccttg   1860

ccctcacttc agtgcctggg tgctcaggct ttgcccaggt gccaggagaa ggtgtgagca   1920

tgagcctatt ggacacacct ggcgacgtat accaggtgtc ccacccctgc caccatgggg   1980

cctcccgata cggcaaccac cacggacctg tggggaccaa tgaggaaaga gagaggcagg   2040

tctgggccag gctcacaggg actccggcat agcagaccct gccccagcag gccccccttgt   2100

ccttcctggg tcctggtcct tcatgaggaa ctagcccatc cctggtgggg ctcccacccc   2160

gcttctcagt gggctctatg cttgcctcgt cggagtcacc cctcaggcag tcctgggatc   2220

ctctcctttc gacccactgt gccttcccgg cctcccgggc ttctgctggg ggcagaagaa   2280

atgcctcccc aggtctgtct ctggaggctc tgagggagat gggcttgggg gctgtaggag   2340

gaggcaggga ttccagggtg tcaggaaggc aggggtgcca ggtcccacct agtgaagtaa   2400

taaaccgtgg gtggtgatag tgacccagtg ccctcactgc ccagccccgc ctgtcctcag   2460

ccagcactgc agggatccca ggcccagact ctggaggcct tcactgatcc cagccacccc   2520

agaaaagctg cagcctgcag gcaccagccg ggccatatgc ccagtgccag ctagggccca   2580

ccgcccatcc tgcacacggg gccgctgggc aggtgccct cacacccca ggatgtcagt   2640

gctcacctcg agcaaagcgc cccagctcgg ccttgggagg tggtcatgtc cagggggatg   2700

atggagagct gtccaaccaa gagagcggga gggaggggaag gagggaggga gagagataga   2760

gagagagaga gagagagagg aagtgtgggc cctaaggctg ccttagtgga ggtgcgcgtg   2820

gcctgcacct caccaagcct agccactctc gcggctctga gtggctcaca ggcttgtgag   2880

ggccccgtcg ctgcctgctg ggtccccacc agggctccct ctaggaatgc gccatggctg   2940

ctatgacaat ttgcacagcc cagtggctta aacaccattt ataccacagg tccagatgaa   3000

tcctgcaggg ccaaggtctg ggggtgctgg aggccatgct ccctccaggc ttgcggggag   3060

aacttccctg cctcctccag tctctccatc cctgagctct cggctcctcc tccgtcttca   3120

gggccagggc gtagcgtctg ctctctcggc ctctgcctcc gcttcccacc tcacctggct   3180
```

```
tctgtctatg tcagtctccc tctgccaacc tcctagaagg acacttgtga ttacattagg    3240

gctcacccct ttaatccagg ggagcctctc cacttcatga ttttcagcta acttgcttct    3300

gcacagaccc cctttcccta taagggcaca cattcactgg tcccgggggct aaggaccttg    3360

ctccaagtcc ctccacccat gatgctgtgc cttccagaaa cctgtcctct gcagctcggt    3420

cttgacccca agcctgctgg tgacctgaac ttcacagggt tatccccttg gactgtgtgc    3480

agcacgatgc aatttctggg cctgaatgtc atgctccctg gggcaggacc ttgagcctgc    3540

agcacacact aggccacctg cagtctcaca ggccatgccc tgggtagaca gggaggtgct    3600

caaccccagc tcgggtcctc tagtctgcct ggctaccatg cttctcactc tcctgcatct    3660

gcagaccctg cgttgccatg tgaggcaggg gtggggtggg gctgagggcg tggctttggt    3720

ccctggctgt ccggatgaag taccagagtg acgccacagc ccatcccggt gacatgctca    3780

cccccaaccc ccgtgtccgg accccggtc ttgtgtggtc cctgatgtgg agtcctcagt     3840

ccttaagata catccagaaa gtcctggcca tgaattggag gtgcagagtc ctgcagagcc    3900

tctgggctgg gctggtgccc ccaggagatg gagggcctgg tggatgccct cctccctcag    3960

agctgggggca gctgcctccc aggggtggga ctctgggctc agagagaggc ccttgagctg    4020

cagctcaggg ggatgcgagg cttcgtggac tgtgtcctgg tccatgtggt gcacgtgtct    4080

ccacctccaa ggagaggctc ctcagtgtgc acctccccca catccgtcct ctctgccggc    4140

cccgggcgtc tgagcagtca ttccatgcca gcacctctgc agcctgctgg gcctcaggtt    4200

ctctgtgagg gacctccccg gccttcggcg gaggtggagt aagctccgtc aaggcaggtg    4260

gcttcgtccc ttcctgtgag tgacaccagt gatgaaatgg acccctccac acaggcatcc    4320

tcagggcaca gggccctggg ggcaccttcc tcctttcgta tttgttgaga aaaaaagtgg    4380

cattgcgctc acaccaggat gctggagcag agctgacatg ctcgggaaag ggcagaggtc    4440

actggggggtg ggaaggtcat ccagtccaga ctcagcacct cgtgggctgg taaactgagg    4500

ctcaaagtgc tggtgccagg cctgaggcct cgcggtgacc cctctctctg gttcccagca    4560

cctgcctgag acctgcccca ggcacccata acctggaatt ccctgtttcc ttgtccaggg    4620

cctgaggaaa tggctcccca ggtctgtctc tggatgctct gaggcagatg ggcttggggg    4680

ctctaggagg aggcagggac tccagggtgt caggaaggca ggggtgccgg gtcccaccca    4740

gtggagtaac aaactgtggg tggcgtttgg gcctccccgc cttccccact gggtgtgctg    4800

gtgctggcgc tgctgggtca gggctgcccg tgaccccaga caccactgtc catcctgtga    4860

ggctcccgtc tgggcatgtc ctgggtggat tcctcctttc tgttaagtag ctacatgagg    4920

cagggggctcc tggatccaaa gcaaatgaca ggaattccag agccaggtgc atccactcag    4980

ggcagccagt gttggtggag ctgcctctag cacatggagg agagtgaaag tcagcctgcc    5040
```

```
cctctcacga gaaaagaacc tggggatacc tctcagcctc cagcgttgca agtgcaaggc   5100

cagtggagtt aatctgcaac gtgcacgagg gcgtgtgtca gtggctgtgt gcaggagtgt   5160

gagtgagcaa gagcaagagc gcatggctcc tgctgtacct caaggtgtgg gctcctggtg   5220

gctgctcagt gttcccaggg gtgagaggcc tcatgtatcc taggctgcct gagatttctg   5280

tgtgctgatc gcatcctcag tttcttgtcc accgcttcac tggcaagagt cccaggctcc   5340

aaggacaccc tccctgcaca tgattgggtg ttaatggtgg cctgggttgt gtcttcccct   5400

ggggatgagg gttgggtgtc catggtgccc tgggctgtgt cctcccctag ggatgagggt   5460

cgggcctcca cgatgccctg ggctgtgtgc tcttatggga atgagggttg ggtgtccaag   5520

atgccctggg ctgtgtcctt ccctggggat gagggttgga tgtccaagat gccctgggct   5580

gtgtactccc ctaggaatga gggctgggtg tccaagatac cctgggctgt gtcctcccct   5640

ggggatgagg gttgggtgtc catggtgccc tgggctgtgt cctcccctgg ggatgacggt   5700

tgggtgtcca tggtgccctg ggctgtgttt ccttggggat gagggttggg tgctatggca   5760

tcctgggcag gtgcttcctt tctgcacaag ggttgggtga ccatgatgtc ctggcaatgg   5820

cttccctggg ttgcctcttt tctgccatgt gggaagagca ggggaggttt agttggtctc   5880

agcacatcat tctctcagga taagtagaag agtgtctgag ctgtgaggcc agtgctccag   5940

ctttggaatt gtcttcccca ccctcacctc catcccatca aagcccgaca tgtcgtgtgg   6000

cagcagcgag gtgggtgttg gctgttctct tgggctgggg gttagtcgtg gacggggaaa   6060

ggagagatgc tggtcaaagg gcatgaagtt tctgctgatg ggaggagtca gttctttttga  6120

tctgttgcac agcatggtga ctatagttaa caataatgac tatttcaaaa ttgctaaaag   6180

atgagatttt aaatgttctc accacaaaat gataagtgtg tgaggtgatg gatatgccac   6240

ttaccttgtt ttaatcatcc cacaatatag acaggcattg tcactttgca ttgtacccca   6300

ggaatcttca catttgcttt tttgtcaatt aaaaatagag acacaaagg agagagggga    6360

gagcaataga ctcttcacgg aaccgtgggc ttctgcctcc gggtaaaata aactgcaaaa   6420

aggattccca ggaaaccgtt ccctctttca gcccttggtt acaggaagcc ggatttggga   6480

aatctgcctg gatgacattc acatgaacgg gcacatacag gaaaacacgg taatgtaatt   6540

agaatagtca gagaaaagta gccagaaatg acattcacat gaacgggcac atacaggaga   6600

aaacacggta acgtaattag aatagtcaga gaaaagtagc cagaaatgac attcacatga   6660

acgggcacat ataggagaaa ccatggtaac gtaattagaa tagtcagaga aaagtagcca   6720

gaaatgacat tcacatgaac gggcacatac aggaaaacac ggtaatgtaa ttagaatagt   6780

cagagaaaag tagccagaaa tgacattcac atgaacgggc acatacagga gaaaacacgg   6840

taacgtaatt agaatagtca gagaaaagta gccagaaatg acattcacat gaacgggcac   6900

atacaggaga aaacacggta acgtaattag aatagtcaga gaaaagtagc cagaagaatt   6960
```

```
tgcaacgtgc ccttgtaaca ccaaatttga tcagtttttt aaaaaatgat cgttatgtag    7020

gtgattgaga agtaaatgta ttctttttta aggtaaaaat ttggaccctt atcatgcata    7080

cccccctctg tgctcttcaa atcaacatca ttattaatat ctgtacattt ttgctcatct    7140

gagccagcac aggctgaggc tgtcagaatg dacacctttt ggttgttggg tttctgtcag    7200

tttctggggt gaagctgcgt gattgagaac gtagctcttg gctgccatct cggggattat    7260

taaggactgt gaactctatc cacaagccat ggcaatatct gtcccaccga atgctccctc    7320

taacacactc ttactcccgt gatgtgtgtt aagggctccg atgatgctga aaacagcaca    7380

ggatgtgaaa aggcaggaac agttctgaag tcaaaggctg atgtcctgtt tctctttccc    7440

tctgtgaccg actcccttcc cagtggtaac aagtacccac agcttggttt gaatttctgc    7500

acgctgttgt ctgtgcactc gctcacactt acgcacacag caggcatgtg ggcgatgctg    7560

ggtattttgt gtatgagtgg gatgcacata cacacatcta catccatatc atgcccatgc    7620

atctgtaact tgctttttcc gtgtaagaac acttcttaga gtttgttcaa tgcatgtgtc    7680

tgtgtgaatg attgaaggca tttctaaccc attttaaaga tggctactta ggaccatatg    7740

gatgttgtac tgatgtcatt tgaccacgtc cattgtttcc atcttttggg ctgttcttgt    7800

gtattttact ttccatgtaa cactgtgaca ttgagaattg gtacctacaa cagtctattt    7860

gctttacatt aaatttgtag gctaatttgt gtaaaaaaaa aaaaaaaaa               7909
```

```
<210>  22
<211>  1072
<212>  DNA
<213>  human

<400>  22
agtcagtgaa acggcagaat cagaagaggt tccacaacca gaaaatcttg gctggaattt     60

caccatcagg aataaaacag aaaaactaaa agagtgcccc agatagcctt tcttaggggc    120

ctgtgacagg tcgcaggaat cttgttggtg atccatccag atgttgtgtg ttctggaagt    180

ggacatcgcg gctctgtgtt tttgaagtca gatctcattg ctgtggtttc tatgcctgac    240

cccccgaagt tcttgctcct gttgccacag ggagccggga gagcacagag cgctgctccc    300

ggtgccctgc agccacacaa acatgctcct gctcctggcg gaggcagagc tgctgggaaa    360

gacatttcgg aagtttcctg tggctgcaac aaattgttca aatctgcact ggagcaccgc    420

tgtgacctgt ctttctccat cttagggcaa acagctcctg aaactggaaa ctccccagca    480

cctactcacc ctacccctca ggctctcctt gtgggggtgg ggcagggga gttgtctgga    540

atgcctggcc tctctgtcca agcatggcag ccttgcccca tgggtggtgc agactcagtt    600

tcccatgcac cttgccccag ggaggaggta ggggttcctt ccatagagat ggtgaagaat    660

aagggaggta gtgatcgtct ctgggatcca gttagatctg cgtttgcagg cagaaagagg    720
```

ctggggcaca tggagagagt gatcaactgg aagattctag ggtcctcaat tttgaaaggt   780

gacatgatac cctggaaagg gcatgaactt agttgtcagt tcgtccttgc cttttccaat   840

caatgctgtg tggccacggc aaattaatga acatctctga gtttcggtct cctgtctaaa   900

atgaggtgat aatagcttct tgaaggttgt aaggccccaa acatgctgcc tggcacatag   960

atggctaatc aatattttcc tacccttccc ttccttccct tctctggagt tgctacctgt   1020

cttctcctgg ggccttgcaa ataaacttct gaattaaaaa aaaaaaaaaa aa   1072

<210>   23
<211>   417
<212>   DNA
<213>   human

<400>   23
acctcccaac caagccctcc agcaaggatt caggagtgcc cctcgggcct cgccatgagg   60

ctcttcctgt cgctcccggt cctggtggtg gttctgtcga tcgtcttgga aggcccagcc   120

ccagcccagg gaccccaga cgtctccagt gccttggata agctgaagga gtttggaaac   180

acactggagg acaaggctcg ggaactcatc agccgcatca acagagtga actttctgcc   240

aagatgcggg agtggttttc agagacattt cagaaagtga aggagaaact caagattgac   300

tcatgaggac ctgaagggtg acatccagga ggggcctctg aaatttccca caccccagcg   360

cctgtgctga ggactcccgc catgtggccc caggtgccac aataaaaat cctaccg   417

<210>   24
<211>   1011
<212>   DNA
<213>   human

<400>   24
ttcctcatta aagtttcaca aataaagcac agcaagactt gtctgcagac acacaggagg   60

cacacggaca gcccgtcaac cagagatgga gacgaaggcc agcatggctc tcacagggca   120

gcgcttctca gaacccctgg ccccccctcgt gccaaggctg gcctgtgtca ggcctcgccc   180

acgccgcctt atgacaaata gargccggtg ccaaggaggt ggctacagag caggggcaag   240

gaagttatcc tcatgttctg ataatgaccc tgcaaatccc accccaccct caggcacctc   300

cgtctaaggt gtccggttac tccaggtaag gaggttccca ggagggccgt gttttcccta   360

gggctgatga aacttgctcc gacaagccag gccactggga ggcacctcag gatggaaaag   420

atgctgagag gctttgctgg ctttcaggat gccgggwgcc ccacgggggc aaaagggggag   480

gaaggaaaga rattctaaag acagattgct gctggtctgt cccgacccag ggtcacagtg   540

tcagcaaaga gaacagcatg attctgacag ggttggattt tgtttcaccc tcggaatgag   600

cagacattca aacacttgca ttttcacgga aatcaacaag agagacagct agcaggacac   660

```
gaggctcctg ccagttctgt gtggaaaggc accagatggt ttgttatgaa acacattttg    720

gtcagaaaat agctgggggtt ttttggttcc tgggaggaca acaaagctag aagaaaarga    780

ggtgtgagtt gcgtgaggag gaggcagaga agaaagcagc tttggcatca gacctgggtt    840

ctactcttca ctctacccct cmacgcttga ggcctcagtt tcctcatctg taaagtggtc    900

atagaatatt tccaaataaa tctaggtgtc aggtttcaca catymtccca ggaagtatgg    960

ggaggcgggg cgcagacact caaacggaca cacagaaacc agaggaagag c             1011
```

```
<210>  25
<211>  2123
<212>  DNA
<213>  human

<400>  25
tagctgatca tgtgacaatc caagatggcg gtgcccggcg aggcggagga ggaggcgaca     60

gtttacctgg tagtgagcgg tatcccctcc gtgttgcgct cggcccattt acggagctat    120

tttagccagt tccgagaaga gcgcggcggt ggcttcctct gtttccacta ccggcatcgg    180

cctgagcggg cccctccgca ggccgctcct aactctgccc taattcctac cgacccagcc    240

gctgagggcc agcttctctc tcagacttcg gccaccgatg tccggcctct ctccactcga    300

gactctactc caatccagac ccgcacctgc tgctgcgtca tctcggtaag ggggttggct    360

caagctcaga ggcttattcg catgtactcg gccgccggt ggctggattc tcacgggact    420

tggctaccgg gtcgctgtct catccgcaga cttcggctac ctacggaggc atcaggtctg    480

ggcccctttc ccttcaagac ccggaaggaa ctgcagagtt ggaaggcaga gaatgaagcc    540

ttcaccctgg ctgacctgaa gcaactgccg gagctgaacc caccagtgct gatgcccaga    600

gggaatgtgg ggactcccct gcgggtcttt ttggagttga tccgggcctg ccgcctaccc    660

cctcggatca tcacccagct gcagctccag ttccccaaga caggttcctc ccggcgctac    720

ggcaatgtgc cttttgagta tgaggactca gagactgtgg agcaggaaga gcttgtgtgt    780

acagcagagg gtgaagaaat accccaagga acctacctgg cagatatacc agccagcccc    840

tgtggagagc ctgaggaaga agtggggaag gaagaggaag aagagtctca ctcagatgag    900

gacgatgacc ggggtgagga atgggaacgg catgaagcgc tgcatgagga cgtgaccggg    960

caggagcgga ccactgagca gctctttgag gaggagattg agctcaagtg ggagaagggt    1020

ggctctggcc tggtgtttta tactgatgcc cagttctggc aggaggaaga aggagatttt    1080

gatgaacaga cagccgatga ctgggatgtg gacatgagtg tgtactatga cagagatggt    1140

ggagacaagg atgcccgaga ctctgtccaa atgcgtctag aacagagact ccgagatgga    1200

caggaagatg gctctgtgat cgaacgccag gtgggcacct ttgagcgcca caccaagggc    1260

attgggcgga aggtgatgga gcggcagggc tgggctgagg ccagggcct gggctgcagg    1320
```

```
tgctcagggg tgcctgaggc cctggatagt gatggccaac accccagatg caagcgtgga    1380

ttggggtacc atggagagaa gctacagcca tttgggcaac tgaagaggcc ccgtagaaat    1440

ggcttggggc tcatctccac catctatgat gagcctctac cccaagacca gacggagtca    1500

ctgctccgcc gccagccacc caccagcatg aagtttcgga cagacatggc ctttgtgagg    1560

ggttccagtt gtgcttcaga cagcccctca ttgcctgact gaccggggttg ggggcttcct    1620

ttcatagcta catgatgaaa accctctgcc ctggcctcat ctaccactga agcagaaagg    1680

agtctgggag cagcagtctt cgtggctggt tcagggtgtt ttgttccgag cctgcctgcc    1740

tgccggttct atacctcagg ggcattttta caaaaagccc cctcccgtcc cctccccttg    1800

gatattaggg gtaacgaccg cttgtctttg gtctctaacc ctaatctctg ggcttgccct    1860

ttgcctcctg cagaactttg aaaagctggg ttgagtgagg ctatcagcac agccttcctt    1920

ggggactctg aaggtgtccc cacgaaggcc agaaaggggg aaagggacct gggcgaggag    1980

aggatttgtg gtgcttggaa gagccggcct tgggtgggcc ctccaccgcc tctaccctca    2040

ctgggtggga ctgccagcgg agagtccgcg ggaggtggct tgggtgtgcg acgtcacgga    2100

agaataaaga cgtttactac tgg                                            2123
```

<210> 26
<211> 1276
<212> DNA
<213> human

<400> 26
```
ggaatccacc cggggtgtgt ggattcctgc cctgttccca caggacagcc ctcaaccaat     60

ggagacagga acctggagtt aaatgcttct ccctttttca ctgagagaga gacatgcaca    120

gtctgatgca ctttctttcc ttctttcttt ttctttcttt tttttcttta agacagagtc    180

tctctctgtc accaaggctg gagtgcaggg gcacgatctg ggctcactgc cacctccacc    240

tcccgggttc aagcaattct cccacctcag cctcccgagt agctgggatt acaggcacta    300

gttaccacgc ccagctaatt tttgtatttt tagtagagat gcggtttcac catattggtc    360

aggctggtct cagactcctg atctcaggta atctgtctgc ctcagcctcc caaggtgctg    420

gaattacagg catgagccac cacacctggc cgtgatgcac tttctagatg ctgtcctaga    480

gatcacactg tgttaagcct cagttgcctt caatgtggtc atctctacag tatacccta    540

gcttttttct cctccgttac tttcccagac cctcactctg ctccctggat tcactttcg    600

aaatagtcct cctgctgcaa agtcctgggc acctgcccta ctttcagcat tggaaggggg    660

gcccaggcta agaccatgag gccccactgt gggcgcccac agccccgttc ctccctctat    720

tcccaccaca gtcacatcct cctgtccctc agtgcttcct cgcctttccc tccagcccac    780

cgtgagatcc caggggacgg agcagcccct tctctgcccc agtgcagggc ttggccttag    840
```

```
cacacggtca gtctgtgctg gggtgaagtg atgaatgagt gagtggttga gtgataatgc    900
atcatcagat ctgtcttttc cacatgtctc tatctccacc cagaaccagt tttctcatcc    960
acaaatgggc atttgaggct gggtgctcct aaaccctaca aaattcagag ctggcacagt   1020
tggggactga ccttccttga tctcacctca ctttctgtat ctataaaatg gggtaccttt   1080
ctctaagagt aaaaaggagg cctggcatag ggaaagaaac tcagctcgag catccagaac   1140
atccatcttg ctctcaaata cctaatacag gggaccatgt tttctgctat aattggtatt   1200
ggagctggta ccatttatta aaggtaattc agttacaaag cttcaaaaaa aaaaaaaaaa   1260
aaaaaaaaaa aaaaaa                                                    1276


<210>  27
<211>  7764
<212>  DNA
<213>  human

<400>  27
ccctgggatg gaggatctgt ctctctctct ctctctcctt ttttttttt tggtggagat     60
gaaggggtgg gtctatggta catcacctga gttgtggggt aaatgtagag agtgtcaatc    120
aaaggcagag ctctcagagc tgggaaggag gctctagatg gcggctgtgc cttagagaga    180
gcgcgctctg ctccctgcct ttgcctcact ttacgcaact ttccctaact ttcgggcagc    240
ctcagggggc ccccgtagcc ccctgccttt cctagggact tactggggtc gattcgaacc    300
ttttttgggg agaaaagcag cttttaggag ctttctttc gtgccttgtt ggaaagaagc    360
agccgtactg agagcccagg tcgttgtttt ttccagctta gaagccatgg cgcacctcca    420
tttttgtgcg ctctcctaat gaggtttttt ttctttcgga cctgttttag tattaattat    480
tgctttattt ttttgaccag ttaacatatt tgagggttat tttatttatt tttcgttttt    540
taacggagga ttttgccttt atttttaatt atttgggatc tgatattttt ctactagtag    600
ataggactct tggtttggac atactacatg gatcagtaaa tacctgggca caggacttca    660
aagcaaacac agattccccc tcccccttaa tatttaagaa ttaaagatg atgagaaata    720
aggacaaaag ccaagaggag gacagttcgc tacacagcaa tgcatcgagt cactcagcct    780
ctgaagaagc ttcgggttca gactcaggca gtcagtcgga aagtgagcag ggaagtgatc    840
caggaagtgg acatggcagc gagtcgaaca gcagctctga atcttctgag agtcagtcgg    900
aatctgagag cgaatcagca ggttccaaat cccagccagt cctcccagaa gccaaagaga    960
agccagcctc taagaaggaa cggatagctg atgtgaagaa gatgtgggaa gaatatcctg   1020
atgtttatgg ggtcaggcgg tcaaaccgaa gcagacaaga accatcgcga tttaatatta   1080
aggaagaggc aagtagcggg tctgagagtg ggagcccaaa aagaagaggc cagaggcagc   1140
tgaaaaaaca agaaaaatgg aaacaggaac cctcagaaga tgaacaggaa caaggcacca   1200
```

```
gtgcagagag tgagccagaa caaaaaaaag taaaagccag aagacctgtc cccagaagaa   1260

cagtgcccaa acctcgtgtt aaaaagcagc cgaagactca gcgtggaaag agaaaaaagc   1320

aagattcttc tgatgaggat gatgatgatg acgaagctcc caaaaggcag actcgtcgaa   1380

gagcggctaa aaacgttagt tacaaagaag atgatgactt tgagactgac tcagatgatc   1440

tcattgaaat gactggagaa ggagttgatg aacagcaaga taatagtgaa actattgaaa   1500

aggtcttaga ttcaagactg ggaaagaaag gagccactgg agcatctact actgtatatg   1560

cgattgaagc taatggcgac cctagtggtg actttgacac tgaaaaggat gaaggtgaaa   1620

tccagtacct catcaagtgg aagggttggt cttacatcca cagcacatgg gagagtgaag   1680

aatccttaca gcaacagaaa gtgaagggcc taaaaaaact agagaacttc aagaaaaaag   1740

aggacgaaat caaacaatgg ttagggaaag tttctcctga agatgtagaa tatttcaatt   1800

gccaacagga gctggcttca gagttgaata aacagtatca gatagtagaa agagtaatag   1860

ctgtgaagac aagtaaatct acattgggtc aaacagattt ccagctcat agtcggaagc   1920

cggcaccctc aaatgagccc gaatatctat gtaaatggat gggactcccc tattcagagt   1980

gtagctggga agatgaagcc ctcattggaa agaaattcca gaattgcatt gacagcttcc   2040

acagtaggaa caactcaaaa accatcccaa caagagaatg caaggccctg aagcagagac   2100

cacgatttgt agctttaaag aaacaacctg catatttagg aggggagaat ctggaacttc   2160

gagattatca gctagaaggt ctaaactggc tagctcattc ctggtgcaaa aataatagtg   2220

taatccttgc tgatgaaatg ggcctaggaa agaccatcca gaccatatca ttcctctcct   2280

acctgttcca ccaacaccag ctgtatggcc cctttcttat agtcgtccct ttatccaccc   2340

tcacctcatg gcagagagag tttgaaatct gggcaccaga gattaacgta gtggtttaca   2400

taggtgacct gatgagcaga aatacgatac gggaatatga atggattcat tcccaaacca   2460

aaagattgaa gttcaacgca cttataacaa catatgagat cctcttgaaa gataagactg   2520

tgctgggcag tattaactgg gcctttctgg gagtggatga agcccatcgg ttgaagaatg   2580

atgactcttt attgtataaa actctgattg atttcaagtc caaccatagg ctcctgatta   2640

cggggacccc tcttcagaat tccctcaaag agctctggtc cttgctgcac tttattatgc   2700

cggagaagtt tgaattttgg gaagattttg aagaagacca tgggaagggg agagagaatg   2760

gctaccagag tcttcataag gtgctagagc ctttccttct ccggagagtc aaaaaagatg   2820

tggagaaatc ccttcctgct aaagtggaac agattctcag ggtggagatg tcagcccttc   2880

agaaacagta ttacaagtgg attctgacca ggaattacaa ggctcttgcc aaaggaacaa   2940

gaggcagcac atctggtttt cttaatattg tgatggaact gaaaaaatgt tgcaaccact   3000

gctatctgat taaaccccct gaagaaatg aaagggaaaa tggacaggag attcttctgt   3060

ccctcataag gagcagtggg aagttgattt tattagacaa actgttgaca agacttcgag   3120
```

```
aaagggggaa tcgagtgctt atcttctctc agatggtgag aatgttggat atcctggctg    3180

aatacctaac tattaaacac tatcctttcc agcgtctgga tggttccatc aagggagaaa    3240

tccgaaaaca ggcactggac cacttcaatg cagatgggtc tgaggacttc tgtttcctgc    3300

tctcgacaag ggctggtggc ctgggaatca atttggcttc agcggacaca gtcgtcatct    3360

ttgactctga ctggaacccc cagaatgact tgcaggcaca agcccgagcg catagaattg    3420

gtcagaagaa gcaggtaaat atttaccgct tagttacaaa ggggactgtg gaggaggaga    3480

tcatagaacg ggccaaaaag aagatggtat tagatcatct ggtgattcag cgcatggaca    3540

ccactggccg gacgatcctg gaaaacaact caggaaggtc caactcaaat ccttttaata    3600

aagaagagct gacagctatt ttgaaatttg gagcagagga tctcttcaaa gaactggaag    3660

gggaggaatc agaacctcag gaaatggata tagatgaaat tttgcggttg gctgaaacga    3720

gagagaatga agtgtcaaca agtgcaacag atgaacttct atcacagttt aaggttgcca    3780

actttgcaac aatggaagat gaagaagagc tagaagagcg tcctcacaag gactgggatg    3840

agatcattcc agaggaacaa aggaaaaaag tagaggagga agagcggcag aaggagctag    3900

aagaaattta tatgctgcct cgaattcgga gttccactaa aaaggctcag acaaatgaca    3960

gtgactctga cactgagtct aagaggcagg cccagagatc ctctgcttct gagagtgaaa    4020

cggaagactc tgatgatgac aagaagccaa agcgcagagg gcgtccgagg agtgtgcgga    4080

aggacctcgt ggagggattt actgatgcag agatccgaag gttcatcaag gcttataaga    4140

agtttggtct ccctcttgaa cggctggagt gcttagcacg tgatgctgag ctggtagata    4200

agtcggtggc agatctgaag cgcctgggtg aactgatcca caacagctgt gtgtcagcaa    4260

tgcaggaata tgaagagcag ctgaaagaaa atgccagcga gggaaaagga ccagggaaaa    4320

ggagaggtcc aacaatcaag atatccggag ttcaggttaa tgtgaaatcc attatccaac    4380

atgaagagga gtttgagatg ctgcataaat ctatccctgt ggaccctgaa gaaaaaaaaa    4440

aatactgctt aacctgtcgt gtcaaagctg cacattttga tgtagagtgg ggggtggaag    4500

atgattctcg cctgttgctg gggatttatg aacatggcta tggaaactgg gagttaatta    4560

aaacagaccc agagcttaaa ttaactgaca aaattctgcc ggtggagaca gataaaaagc    4620

ctcaggggaa gcagctacag acccgagcgg attacttgtt gaagctgctc agaaagggtc    4680

tggagaagaa gggggctgtg acaggtgggg aggaggccaa attaaagaag cggaagcctc    4740

gggtaaagaa ggaaaacaaa gtgcccaggc tgaaagagga gcatggaatt gagctttcat    4800

ctcctaggca ttcagataat ccatcagaag agggagaagt gaaagatgat ggcttggaaa    4860

aaagtccaat gaaaaaaaaa cagaagaaga aagagaacaa ggagaacaag gagaaacaaa    4920

tgagttctag gaaagacaaa gaaggggaca aggaaagaaa gaagtcaaaa gataagaaag    4980
```

Page 35

```
agaagcctaa aagtggtgat gccaaatctt cgagtaaatc aaagcgatct cagggtcctg   5040

tccatattac agcaggaagt gaacctgtcc ccattggaga ggatgaggat gatgatctgg   5100

accaggagac attcagcata tgtaaggaga ggatgaggcc cgtgaaaaag gcactgaaac   5160

agctcgacaa acctgacaag gggctcaacg tgcaagaaca gctggaacac acccggaact   5220

gcctgctgaa aatcggagac cggatagccg agtgccttaa agcctactca gatcaggagc   5280

acatcaaact ctggaggagg aacctatgga ttttgtttc caagtttaca gaatttgatg    5340

ctcgaaaact gcataagtta tacaagatgg ctcataagaa aaggtctcaa gaagaagagg   5400

agcaaaagaa gaaagacgac gtgactgggg gtaagaaacc atttcgtcca gaggcctcag   5460

gctccagccg ggactctctg atatctcagt cccatacctc acacaacctt caccctcaga   5520

agcctcattt gcctgcctcc catggcccac agatgcatgg acacccaaga gataactaca   5580

atcaccccaa caagagacac ttcagtaatg cagatcgagg agactggcag agggaaagaa   5640

agttcaacta tggtggtggc aacaacaatc caccatgggg aagcgacagg caccatcagt   5700

atgagcagca ctggtacaag gaccaccatt atggggaccg gcgacatatg gatgcccacc   5760

gttccggaag ctatcgaccc aacaacatgt ccagaaagag gccttatgac cagtacagca   5820

gtgaccgaga ccaccgggga cacagagatt attatgacag gtatgcaaaa ggctgtgaga   5880

caccaggtgc caacctttgc caggagctgt ttctagggag aaagtgacgt atacatgaat   5940

gtatttatct atcaaattac tgaagatctc atcatgcatg tgtcagccac agcgaatccc   6000

atgtcttggt tataggtttt atgttttgtt ttctgggtca tagggagcac atttcacctg   6060

tgcaggaaaa gagtttctg ccgtcttttg aggaaatcta gtgaagaggt cgccataaaa    6120

tattagagtc aacaaccaaa attattaagc tctgtgcgag gctgtcagcc acactaggta   6180

tcagggatcc cgagatgggt accagcccac agtccttacc tgccacgagc ccataattga   6240

agagtcaaag tcttctgaag ctgcaccctc tttacttcag tacaatgcca ccagtagtac   6300

gatgagccaa agctttacat tgtgagagta gcaagtccag ggagagctaa agaggtttta   6360

tctgtatttc ctaatttcaa atcttggata atttaacctc atagcagctt tggttttccc   6420

tgggctgatg atgtgcgtca tttgcactgt accttgaatt tacagtggga aaatttcata   6480

taaacgtgtc aaagtcgtgc tttgttttg gaagatctgg taacagcagc ccgcattagc    6540

agagagctgt agctgagtag ctgccacctc gttgggagac tgcccctcgc tcccacccтt   6600

ctctattgtc tggacccagt gggcatcttg ccctgcgttc ttctagtagg tctgtatttc   6660

tatttgatgt cactttcctt ttgcctgaag gacttttct gctggtgata aactctttca    6720

gtgtttgtat atatgcctga aaaagtattt tgccttcatt tttgaaagta gttttтgctg   6780

agtgtataca tttttggctt tacagtttct ttcagtgctt taaagatgta cctctgctat   6840

ttacttgcat tgtтttgtga tgaaaaatct gtcatcctta tctttgttcc tctttacata   6900
```

```
atgttccttt taaaaaaaat cactgattat gatgtgcctt ggtgtatttt tccttggttt      6960

cttgtgcttg gaaatttttg aacttcttgg atctgtgggt ttattgtttc cataaaattt      7020

ggaaattttt acaatcttct tcaaatattt tttctgatcc cccactctct cttcttcttt      7080

ggagattctc attcacccta tattagcttg cttgaagttg tctcacagct cacttgtatt      7140

ctgttgactt ttaaaaaatt atgctttctg tttcactgtg gatagtttct attgctacct      7200

cttcaagttc actaatactt tcctttttcaa tgtcaagact gctgtgaggc ccatccagtg      7260

tactttgcat tttatacatt gtagttctaa aagttcggaa agttgttttt gggtcttttt      7320

atatatgttc tgtgtctaac cttttaaaac ctggaacaca gatataacaa tggttttgat      7380

gtccttgtct gcgaatctta tcacttgggt cagtttcagt tgatacctcc tcactgtggg      7440

tcttgctccc ctggtgcttt ctgtgcctag taattttgt cagatgccag atgtaacatt       7500

taccttgttg ggtgctggat atttctgtat tcctgtaagt attctggagc tttgttatga      7560

gttgcaggtt atttggaagc agtttccttt ttcaggtctt gctgttaaga ttcgttaggt      7620

agaaccagag cagtgctcag tcaagggcta atgattgccc acccccaagg taaagagcct      7680

cattgcactc tacccaattg cgttagtctg ttttgcagga atacctgagg ctgggtaatt      7740

tatagagaaa agagttttat ttgg                                            7764
```

```
<210>   28
<211>   3000
<212>   DNA
<213>   human

<400>   28
ggcagcgtcc gcgggaggtg aggtggctgt ggggacccag gtggcctctt ccctggggcc        60

ttgctaatga cggcaaaatc cgggttctgc caaaatatat ttaaaaaggt ttattcctag       120

tcagtatgag tgactgtggc ccaggttatt cagcctcaag aggtcctgtg aaagtgcccg       180

agatggtcag gcttgcaggt taatttttata caattcaggg agacaggaat ttcaggtaaa       240

gtcataaatc aggctgagca gtgtggctca tgcctgtggt cccagcactt tgggaggcca       300

ggagttccag agcagcctgg gcagcacagc aagaccctgt ctctacatga aattagaaaa       360

ataaaaaaat tagcggggcg tggtgtccca tgcctgtggc ctcagctact tgggaggccc       420

agtcagttga gtccaggagg tggaggctgt aaccagctat gttggctgca ctgcacgcta       480

gcctgggtaa cacagcgaga tcctgcctcc aaaaagaaaa tcataaatca ataagagaaa       540

gatatacacg ggttcctccc aaaaagctgg tatatctcca aagggtttac acctcatggg       600

ggcacttagg gattctttag tggacagttg gttgagagac ttaagctact gcctgaagac       660

tggaatcaga agcatgccag agttaagggg attgcgtaga tcaaagttct tattatgtag       720

atgaagcctc ttagttggca actctcagaa tagatggtaa atgtctgttt tcagtttttt       780
```

```
gggtttttgt gttttttgttt ttgtttttag agagagtctt gctctgtcgc ccaggctaga    840

gtgcagtggc gtgatctcag ctcactgcaa cctccacctc ccaggtttga gcggttctcc    900

tgcctcggcc tcctgggtag ctgggactac gggcgcccgc caccacgcct ggctaatttt    960

tgtattttta gtggagatgg ggtttcacca tgttgctgag gctggtcttg acttcctgac   1020

ctcaggtgat ccgcccacct ctacctccca aagtgctggg attacaggcg tgggccaccg   1080

cgcgtcaggc tggctgtctc ttccagacct aagaaaggct tagaacaaag gaggtctggc   1140

tacattaatg gagattcgct gcagatgcaa attttcccac taaagatagc tttgcggggc   1200

tatccatttc aatctgttgc ccctgtggca gccacttcaa aacatgtcaa agaagtatat   1260

tttggggtaa aataatttcc ttcagcatct gctgtcatgt gatgctgtac cagagtcagg   1320

ttggaaagtg agcctcatta tataagagta ataaaactca tctgatgaga ttttatggtt   1380

tctcgggcag gattccccaa gcctcataca taggcatttg ggcaagggaa aaaaggtgaa   1440

tttagtcctc accaggttgg tagggcttcc tcggttattg gagtgggagt aacagcaacc   1500

attgggccca gcagtttttt taaatgtctc tggggctgtg gactgaccat ccaaataact   1560

gattttaatc atttcattat ggaaaaattg tcagcagaac ccccaagtag agagacccat   1620

cagtcaagat atacctcatg accttgcaag ctaatctagc ttgacccaga tcccctccta   1680

atctgtgcag attcattgag gaatgtcata gccatgccta ctggttaaga catagtcctt   1740

tacagtgaga gttgaaaccc aagctctatc actttcttgg ctgtgttgct ttgagaaagg   1800

catttaaatg ttttgtgcct gtttcctcat ctgaaattgg tgggtaatag tcacttcata   1860

ggacagttgt gaagattgaa tgcagaaaaa tttgtgccac gcctggaacc gtccctggca   1920

tatattaaat tctaaaaaag tgttaaatat tataatgaat atcaacactt ccttattctg   1980

gaagcaccga caggatatgc tgtgtttagt gttagcatca tgtcaggaca gggtctgttg   2040

cgatgcccac actcaggatc tgttcccagg aacctgcgta aagtttttctt ctctggaaga   2100

ctttgggtcc tttttttttta acaagaagag gctctaccct gggactggga atttccaagg   2160

ccacctttga ggatcgcaga gctcatttta gagccatttt agtccccagc tcctcttcct   2220

ccactcccac gttaccgtg agaggactgt ctgcagggta agggaggaca gcccaacccc   2280

aggtggggac ttcttatgta ttgccttcct gcagtgcctt ctctgcccta aaccatggtg   2340

ggtttccttt gctaatgtct gacatcttgt gccctacact gtcccatctg aggctcagaa   2400

cctctcagcc ggttctcatg gggaacgttc cccagatctg atgccctcat tcaggacact   2460

tccatcattg tccctacatt tcttctctca gtgctttatt caggctgctg cattcgtggt   2520

gcagaccagg tcttgtaaaa aattattcag tcagcatgtg ctgagccatt gtcctgtccc   2580

agggacaggg ctttatagtc attgccctat tcatctcttc aaccaatgtg gaagttagga   2640
```

```
attggaatcc ccatttcaca gactaagaag tggcgtgtta atcagttgaa ataattttta    2700

cggcttggcg tggtggccca tacctgtaat cccagcactt tgggaggccg gggcgggcgg    2760

attacctgag gccaggggtt cgagaccagc ctggccaaca tggtgaaacc tcatctctgc    2820

tgggaataca gaaattagcc aggcatggtg gctcacgcct gtagtcccaa ctgctctgga    2880

gcctgaagca ggataatcgc ttgaatccag gagatggagg ttgcagtgag cagagagcat    2940

gccactgcac tacagcctga gcaagagtga gactccgtca caaaaaaaaa aaaaaaaaa     3000
```

<210> 29
<211> 489
<212> DNA
<213> human

<400> 29
```
agagccgcag gtcagtcgtg aagagggagc tctattgcca ccatgagttt ctccggcaag     60

taccaactgc agagccagga aaactttgaa gccttcatga aggcaatcgg tctgccggaa    120

gagctcatcc agaaggggaa ggatatcaag ggggtgtcgg aaatcgtgca gaatgggaag    180

cacttcaagt tcaccatcac cgctgggtcc aaagtgatcc aaaacgaatt cacggtgggg    240

gaggaatgtg agctggagac aatgacaggg gagaaagtca agacagtggt tcagttggaa    300

ggtgacaata aactggtgac aactttcaaa aacatcaagt ctgtgaccga actcaacggc    360

gacataatca ccaataccat gacattgggt gacattgtct tcaagagaat cagcaagaga    420

atttaaacaa gtctgcattt catattattt tagtgtgtaa aattaatgta ataaagtgaa    480

ctttgtttt                                                            489
```

<210> 30
<211> 1699
<212> DNA
<213> human

<400> 30
```
aggtgagcgg ttgctcgtcg tcggggcggc cggcagcggc ggctccaggg cccagcatgc     60

gcgggggacc ccgcggccac catgtatgtg ggctatgtgc tggacaagga ttcgcccgtg    120

taccccggcc cagccaggcc agccagcctc ggcctgggcc cggcaaacta cggcccccg    180

gccccgcccc cggcgccccc gcagtacccc gacttctcca gctactctca cgtggagccg    240

gcccccgcgc ccccgacggc ctggggggcg cccttccctg cgcccaagga cgactgggcc    300

gccgcctacg gcccgggccc cgcggcccct gccgccagcc cagcttcgct ggcattcggg    360

ccccctccag actttagccc ggtgccggcg ccccctgggc ccggcccggg cctcctggcg    420

cagcccctcg ggggcccggg cacaccgtcc tcgcccggag cgcagaggcc gacgccctac    480

gagtggatgc ggcgcagcgt ggcggccgga ggcggcggtg cagcggtaa gactcggacc    540

aaggacaagt accgcgtggt ctacaccgac caccaacgcc tggagctgga gaaggagttt    600
```

```
cattacagcc gttacatcac aatccggcgg aaatcagagc tggctgccaa tctggggctc    660

actgaacggc aggtgaagat ctggttccaa aaccggcggg caaaggagcg caaagtgaac    720

aagaagaaac agcagcagca acagccccca cagccgccga tggcccacga catcacggcc    780

accccagccg ggccatccct gggggggcctg tgtcccagca acaccagcct cctggccacc    840

tcctctccaa tgcctgtgaa agaggagttt ctgccatagc cccatgccca gcctgtgcgc    900

cggggggacct ggggactcgg gtgctgggag tgtggctcct gtgggcccag gaggtctggt    960

ccgagtctca gccctgacct tctgggacat ggtggacagt cacctatcca ccctctgcat    1020

cccccttggcc cattgtgtgc agtaagcctg ttggataaag accttccagc tcctgtgttc    1080

tagacctctg ggggataagg gagtccaggg tggatgatct caatctcccg tgggcatctc    1140

aagccccaaa tggttggggg aggggcctag acaaggctcc aggccccacc tcctcctcca    1200

tacgttcaga ggtgcagctg gaggcctgtg tggggaccac actgatcctg agaaaaggg    1260

atggagctga aaaagatgga atgcttgcag agcatgacct gaggagggag gaacgtggtc    1320

aactcacacc tgcctcttct gcagcctcac ctctacctgc ccccatcata agggcactga    1380

gcccttccca ggctggatac taagcacaaa gcccatagca ctgggctctg atggctgctc    1440

cactgggtta cagaatcaca gccctcatga tcattctcag tgagggctct ggattgagag    1500

ggaggccctg ggaggagaga aggggcaga gtcttcccta ccaggtttct acacccccgc    1560

caggctgccc atcagggccc agggagcccc cagaggactt tattcggacc aagcagagct    1620

cacagctgga caggtgttgt atatagagtg gaatctcttg gatgcagctt caagaataaa    1680

tttttcttct cttttcaaa                                                  1699
```

<210> 31
<211> 2612
<212> DNA
<213> human

<400> 31

```
gctgatagca cagttctgtc cagagaagga aggcggaata aacttattca ttcccaggaa     60

ctcttggggt aggtgtgtgt ttttcacatc ttaaaggctc acagaccctg cgctggacaa    120

atgttccatt cctgaaggac ctctccagaa tccggattgc tgaatcttcc ctgttgccta    180

gaagggctcc aaaccacctc ttgacaatgg gaaactgggt ggttaaccac tggttttcag    240

ttttgtttct ggttgtttgg ttagggctga atgttttcct gtttgtggat gccttcctga    300

aatatgagaa ggccgacaaa tactactaca caagaaaaat ccttgggtca acattggcct    360

gtgcccgagc gtctgctctc tgcttgaatt ttaacagcac gctgatcctg cttcctgtgt    420

gtcgcaatct gctgtccttc ctgaggggca cctgctcatt ttgcagccgc acactgagaa    480

agcaattgga tcacaacctc accttccaca agctggtggc ctatatgatc tgcctacata    540
```

```
cagctattca catcattgca cacctgttta actttgactg ctatagcaga agccgacagg    600

ccacagatgg ctcccttgcc tccattctct ccagcctatc tcatgatgag aaaaagggggg   660

gttcttggct aaatcccatc cagtcccgaa acacgacagt ggagtatgtg acattcacca    720

gcgttgctgg tctcactgga gtgatcatga caatagcctt gattctcatg gtaacttcag    780

ctactgagtt catccggagg agttattttg aagtcttctg gtatactcac cacctttttta   840

tcttctatat ccttggctta gggattcacg gcattggtgg aattgtccgg ggtcaaacag    900

aggagagcat gaatgagagt catcctcgca agtgtgcaga gtcttttgag atgtgggatg    960

atcgtgactc ccactgtagg cgccctaagt ttgaagggca tcccctgag tcttggaagt    1020

ggatccttgc accggtcatt ctttatatct gtgaaaggat cctccggttt taccgctccc    1080

agcagaaggt tgtgattacc aaggttgtta tgcacccatc caaagttttg gaattgcaga    1140

tgaacaagcg tggcttcagc atggaagtgg ggcagtatat ctttgttaat tgcccctcaa    1200

tctctctcct ggaatggcat ccttttactt tgacctctgc tccagaggaa gatttcttct    1260

ccattcatat ccgagcagca ggggactgga cagaaaatct cataagggct ttcgaacaac    1320

aatattcacc aattcccagg attgaagtgg atggtccctt tggcacagcc agtgaggatg    1380

tttttccagta tgaagtggct gtgctggttg gagcaggaat tggggtcacc ccctttgctt    1440

ctatcttgaa atccatctgg tacaaattcc agtgtgcaga ccacaacctc aaaacaaaaa    1500

agatctattt ctactggatc tgcagggaga caggtgcctt ttcctggttc aacaacctgt    1560

tgacttccct ggaacaggag atggaggaat taggcaaagt gggttttcta aactaccgtc    1620

tcttcctcac cggatgggac agcaatattg ttggtcatgc agcattaaac tttgacaagg    1680

ccactgacat cgtgacaggt ctgaaacaga aaacctcctt tgggagacca atgtgggaca    1740

atgagttttc tacaatagct acctcccacc ccaagtctgt agtgggagtt ttcttatgtg    1800

gccctcggac tttggcaaag agcctgcgca aatgctgtca ccgatattcc agtctggatc    1860

ctagaaaggt tcaattctac ttcaacaaag aaaattttg agttatagga ataaggacgg     1920

taatctgcat tttgtctctt tgtatcttca gtaattgagt tataggaata aggacggtaa    1980

tctgcatttt gtctctttgt atcttcagta atttacttgg tctcgtcagg tttgagcagt    2040

cactttagga taagaatgtg cctctcaagc cttgactccc tggtattctt tttttgattg    2100

cattcaactt cgttacttga gcttcagcaa cttaagaact tctgaagttc ttaaagttct    2160

gaagttctta aagcccatgg atcctttctc agaaaaataa ctgtaaatct ttctggacag    2220

ccatgactgt agcaaggctt gatagcagag gtttggtggt tcagagttat acaactaatc    2280

ccaggtgatt ttatcaattc cagtgttacc atctcctgag ttttggtttg taatctttg     2340

tccctcccac ccccacagaa gatttcctaa gtagggtgac tttttaaata aaaatttatt    2400
```

Page 41

```
gaataattaa tgataaaaca taataataaa cataaataat aaacaaaatt accgagaacc    2460

ccatccccat ataacaccaa cagtgtacat gtttactgtc acttttgata tggtcttatc    2520

cagtgtgaac agcaatttat tattttttgct catcaaaaaa taaaggattt tttttcactt    2580

gaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa                                   2612
```

<210> 32
<211> 3345
<212> DNA
<213> human

<400> 32
```
gaattccgtc tcgaccactg aatggaagaa aaggactttt aaccaccatt ttgtgactta      60

cagaaaggaa tttgaataaa gaaaactatg atacttcagg cccatcttca ctccctgtgt     120

cttcttatgc tttatttggc aactggatat ggccaagagg ggaagtttag tggacccctg     180

aaacccatga cattttctat ttatgaaggc caagaaccga gtcaaattat attccagttt     240

aaggccaatc ctcctgctgt gacttttgaa ctaactgggg agacagacaa catatttgtg     300

atagaacggg agggacttct gtattacaac agagccttgg acagggaaac aagatctact     360

cacaatctcc aggttgcagc cctggacgct aatggaatta tagtggaggg tccagtccct     420

atcaccatag aagtgaagga catcaacgac aatcgaccca cgtttctcca gtcaaagtac     480

gaaggctcag taaggcagaa ctctcgccca ggaaagccct tcttgtatgt caatgccaca     540

gacctggatg atccggccac tcccaatggc cagctttatt accagattgt catccagctt     600

cccatgatca acaatgtcat gtactttcag atcaacaaca aaacgggagc catctctctt     660

acccgagagg gatctcagga attgaatcct gctaagaatc cttcctataa tctggtgatc     720

tcagtgaagg acatgggagg ccagagtgag aattccttca gtgataccac atctgtggat     780

atcatagtga cagagaatat ttggaaagca ccaaaacctg tggagatggt ggaaaactca     840

actgatcctc accccatcaa aatcactcag gtgcggtgga atgatcccgg tgcacaatat     900

tccttagttg acaaagagaa gctgccaaga ttcccatttt caattgacca ggaaggagat     960

atttacgtga ctcagccctt ggaccgagaa gaaaaggatg catatgtttt ttatgcagtt    1020

gcaaaggatg agtacggaaa accactttca tatccgctgg aaattcatgt aaaagttaaa    1080

gatattaatg ataatccacc tacatgtccg tcaccagtaa ccgtatttga ggtccaggag    1140

aatgaacgac tgggtaacag tatcgggacc cttactgcac atgacaggga tgaagaaaat    1200

actgccaaca gttttctaaa ctacaggatt gtggagcaaa ctcccaaact tcccatggat    1260

ggactcttcc taatccaaac ctatgctgga atgttacagt tagctaaaca gtccttgaag    1320

aagcaagata ctcctcagta caacttaacg atagaggtgt ctgacaaaga tttcaagacc    1380

ctttgttttg tgcaaatcaa cgttattgat atcaatgatc agatccccat ctttgaaaaa    1440
```

```
tcagattatg gaaacctgac tcttgctgaa gacacaaaca ttgggtccac catcttaacc   1500

atccaggcca ctgatgctga tgagccattt actgggagtt ctaaaattct gtatcatatc   1560

ataaagggag acagtgaggg acgcctgggg gttgacacag atccccatac caacaccgga   1620

tatgtcataa ttaaaaagcc tcttgatttt gaaacagcag ctgtttccaa cattgtgttc   1680

aaagcagaaa atcctgagcc tctagtgttt ggtgtgaagt acaatgcaag ttcttttgcc   1740

aagttcacgc ttattgtgac agatgtgaat gaagcacctc aattttccca acacgtattc   1800

caagcgaaag tcagtgagga tgtagctata ggcactaaag tgggcaatgt gactgccaag   1860

gatccagaag gtctggacat aagctattca ctgaggggag acacaagagg ttggcttaaa   1920

attgaccacg tgactggtga gatctttagt gtggctccat ggacagaga agccggaagt   1980

ccatatcggg tacaagtggt ggccacagaa gtaggggggt cttccttaag ctctgtgtca   2040

gagttccacc tgatccttat ggatgtgaat gacaaccctc ccaggctagc caaggactac   2100

acgggcttgt tcttctgcca tcccctcagt gcacctggaa gtctcatttt cgaggctact   2160

gatgatgatc agcacttatt tcggggtccc cattttacat tttccctcgg cagtggaagc   2220

ttacaaaacg actgggaagt ttccaaaatc aatggtactc atgcccgact gtctaccagg   2280

cacacagact ttgaggagag ggcgtatgtc gtcttgatcc gcatcaatga tggggggtcgg   2340

ccacccttgg aaggcattgt ttcttacca gttacattct gcagttgtgt ggaaggaagt   2400

tgtttccggc cagcaggtca ccagactggg atacccactg tgggcatggc agttggtata   2460

ctgctgacca cccttctggt gattggtata attttagcag ttgtgtttat ccgcataaag   2520

aaggataaag gcaaagataa tgttgaaagt gctcaagcat ctgaagtcaa acctctgaga   2580

agctgaattt gaaaaggaat gtttgaattt atatagcaag tgctatttca gcaacaacca   2640

tctcatccta ttactttca tctaacgtgc attataattt tttaaacaga tattccctct   2700

tgtcctttaa tatttgctaa atatttcttt tttgaggtgg agtcttgctc tgtcgcccag   2760

gctggagtac agtggtgtga tcccagctca ctgcaacctc cgcctcctgg gttcacatga   2820

ttctcctgcc tcagcttcct aagtagctgg gtttacaggc acccaccacc atgcccagct   2880

aatttttgta tttttaatag agacggggtt tcgccatttg gccaggctgg tcttgaactc   2940

ctgacgtcaa gtgatctgcc tgccttggtc tcccaataca ggcatgaacc actgcaccca   3000

cctacttaga tatttcatgt gctatagaca ttagagagat ttttcatttt tccatgacat   3060

ttttcctctc tgcaaatggc ttagctactt gtgttttcc cttttggggc aagacagact   3120

cattaaatat tctgtacatt ttttctttat caaggagata tatcagtgtt gtctcataga   3180

actgcctgga ttccatttat gtttttctg attccatcct gtgtcccctt catccttgac   3240

tcctttggta tttcactgaa tttcaaacat ttgtcagaga agaaaaaagt gaggactcag   3300

gaaaaataaa taaataaaag aacagccttt tgcggccgcg aattc              3345
```

<210> 33
<211> 1201
<212> DNA
<213> human

<220>
<221> misc_feature
<222> (532)..(532)
<223> w equals a or t

<400> 33
wttatwahaa atttatttt aacccaatag aaaagcaaat ttggaatcta tttacaagta   60

ctatatattt acatatatac agttagagtg ggagatttaa agaaaatggg cagagaaaca   120

caatataaat caaagaatat gccactgtac aaggcattat tatcattatc atggtcctta   180

atgttactga acctttacta tagtaataaa tacagttcta tatttacaca tcttataaaa   240

catctcataa atgtattttt tcaaatccaa gthaaaacat ctgatcaaaa taaacatgct   300

tatataaaaa taaatctacc taacagccat ttggtttgga tgtattgarg ctaatatagg   360

ataatagagg gtaagrbtta atactttgac ttttcttatt taataacttg cttcttaaaa   420

tacctaacac agtattaata tggaatargc rgagargtaa tgttcctaac atcaagtggg   480

ttatccagag agaacacagc taaaaccaag ctaaataaac aggataatac gttactgagt   540

ctcttgagtc caaagtggtg tcagatattg ggtttgccag agctactaga gatacatgtg   600

tgagaggttg tatcagtgga cttaatttat gtgatgtgca catttgatca ttaagatgca   660

catcagtttg aatcaactga taaaacttat tgcaaaaatt ctttactaac ccagaaaaaa   720

aatcccagat tgcttacttt cttttccagg tatgtycatt gctggcagtg gaattccctt   780

ctgagctttg ggcmcaagga gttaaaaaca aatcagataa gacatacgtc acctgtscat   840

gattscctta gtaacaattt aagaattttg gtcagttttt ctttcaaaat acttgtaagc   900

agttttatcc catgakggtg gaccatctag tgctgataca taaamctggt atctctaaaa   960

wtgatctcaa tatgagtgag taacaatacy twacattacc ayctaaggga ttgtscttag   1020

aaggatcttt cysmkkaags aaasgwggat haaaathtca awkktattwt attwatccaw   1080

ttwaaaychm haaaataaat ttttattwaa ccawatttcy aatcccmaaa ccyttttttt   1140

ttttaaaaa aattttatat tamcbkktcm tkyyktaaam dtttttaaa atttaaattw   1200

a   1201

<210> 34
<211> 2778
<212> DNA
<213> human

<400> 34

```
ctcattttga tgtctagaat caggggatcc aggatcatca ccaaggtcat tttcccaggt    60

atggaggggt ctttctgctt ctttcttgtc atgcacagct gctgaggaag gggctgggag   120

taaagacagt gaaatgggga ggaggagtcc attcaaaccg agaaacaaag tgtttggttt   180

ttcttacccc tggtgtagaa gctaccaacc ttttccaaga aagagggcct ggcccccttc   240

tcgggtctgg ctgggtgcct gctgtgcctc tctggcctcc cctccgaagg gcaccattcc   300

ctcgggtgag tactaccggc ctgcaccgtc ttccagtggg gacagcctga aagagagtc    360

tggggcctta cttcagtacc ttccttcact ggcctcaccc tgtgcaaatc atgccacacg   420

ctgcagcctc cttttcccta tctataaaat aaaaatgacc ctgctctatc tcactgggct   480

ggcaagaaca cactgttgtt gccttgcaga cagatgtgct gaggctgtag aaagtgcttt   540

ttatttggtt gggagcttgt gcataaatgc gagaggggct gcacatctga cggactagag   600

gtgactcatg gctgaaccgg aacaggacat cggggagaag ccagcagcca tgctgaactc   660

tccacagggc cctgtgaaaa gctcttcacc tcctctgccc tctggatcta gtgaagccta   720

ttcatccttc agatgtcagc tcaaataatc aaccttcatg gaggcctccc ttgaccccta   780

acatgctttc aaagtactgt gtatttcaca ttcatcatgc cccgacaact gtgatttccc   840

atttattaat atctgtctct tctgctggcc tgcaaactcc aggagcacag agacatcttt   900

gggatttttg aacatgattt ccccagggct tagcccagtg cctggtgcaa agcaggcttt   960

caacatgttc agtggatatt gtaagaaaga aagaaataca caaaaggcct ggcatatgca  1020

aagcactcta atattcact cctttccctt ccctctgggt gagaaaattt ctccttataa  1080

agacaccctc ctaactgtat ctctgctaga gaactgaaga cataaagcac tctgtgccaa  1140

aaatatttaa gtaaaaactt gagctaagca cagagattat aaatatttct tccccagatt  1200

acgcaccatt taaaaatact gtctcagctc cttttcatga tttgggtggt gattaaagaa  1260

aattactctt caagactgaa agtcattact gcccttttcc tgacttgcct tttcccttga  1320

gaaggggagg ataagctgca gggcaggaag tggaagtggg gcatccttgt cctttgtctg  1380

gcagacagcc aactggtcag gtactgctcc ttctcaactc tttcctgatt cccaggtgaa  1440

tataaacaag aaggcacaaa tccacacttg ccaacaacgg acccaagtga taacaagaaa  1500

cccagtgaca cctgtctagg tgaagactca gccctatgt gaccaggttg caaagccaaa  1560

ctgaccatct gctttccatt tggactttta gttcatactg tatcttctca ggacagttaa  1620

gttggaatac aatgccactg tcctgaaaga tggtagaatt atcctatttc tggaggagtg  1680

ggggtggtgg gtaggaatct caagagcgat ttgctcctct gcacaatagc ttctttaagg  1740

acaccagggc ccccagggct atacatttcc ctgaagcttt ccagataagc aacaaggtat  1800

gagcacctgc tatgtattgc ccaagggtga tgtgtttaaa tatccattgc atattttaaa  1860

tccttggctg gcttaaagct gcaagctttc tgtcttcagt ggatataatg ggggcataca  1920
```

```
tcccagagct tgcccaacac tccaagaaaa gaaccctcag ctaatgcaaa gtgtgtatgt    1980

gcccatgaaa gctccatgtc tacttaacat tcagttttta ggattattta tgctgtaata    2040

atagatatga aaatctctga caggtatttt gtttccttta caaactgtat ttgaatttat    2100

gggtgattta gagcttgtgt ttaaagtcag aattcagaac cccaaagaaa atgacttcat    2160

tgaaattgaa ctgaagagac aagaactgag ttaccaaaac ctactaaacg tgagttgctg    2220

tgaactgggg attaaaccag aacgagtgga gaagatcaga aagctaccaa acacactgct    2280

cagaaaggac aaagacattc gaagactgcg ggactttcag gaagtggaac tcattttaat    2340

gaaaaatgga agctccagat tgacagaata tgtgccatct ctgacagaaa ggccctgcta    2400

tgatagcaaa gctgcaaaaa tgacttatta aatactccca ggaatggccg cgcatggtgg    2460

ctcacccct gtaatcccag cactttggga agccaaggtg ggcggatcac ctgaggtcag    2520

gagttctaga ccagcctggc caacatatag tgaaacccag tctctactaa aaaaaataca    2580

aaaattagct aggtgtggtg gcgcacacct gtagtagtcc cagctacatg ggaagctgag    2640

gcaggagaat cacctgaacc caggaggcag aggttgcagt gagctgagat tgcgccactg    2700

cactccagcc tggcgacaga gcaagactct gtctctcaaa ataaataaat aaataaataa    2760

ataaataaat aaataatc                                                  2778
```

<210> 35
<211> 2973
<212> DNA
<213> human

<400> 35
```
attctggggc tcgggggatc ccggacaccc tctcagctcc tgcccggggg cccatgtagt      60

cccttctgcc ctgtgcctcg gtgcctgtga cctgagcccc ttggttgacc ctgcactcgt     120

ccaacttggg ccaaacgact gcccctcctt ctggcagtgg gctggaccag ccggccagcg     180

ggagccccct tggcagaagc cggtcgtaaa ggatcataaa ctggcggcgt ctggctgggg     240

cgaaggtcgc tgaggtagga actgcgccag tcctagacgc cagacccgct cagaccctcc     300

tgccaggtga cagccgccaa gatggggtct tgggccctgc tgtggcctcc cctgctgttc     360

accgggctgc tcgtccgacc cccggggacc atggcccagg cccagtactg ctctgtgaac     420

aaggacatct ttgaagtaga ggagaacaca aatgtcaccg agccgctggt ggacatccac     480

gtcccggagg ccaggaggt gaccctcgga gccttgtcca ccccctttgc atttcggatc     540

cagggaaacc agctgtttct caacgtgact cctgattacg aggagaagtc actgcttgag     600

gctcagctgc tgtgtcagag cggaggcaca ttggtgaccc agctaagggt gttcgtgtca     660

gtgctggacg tcaatgacaa tgccccccgaa ttcccctta agaccaagga gataagggtg     720

gaggaggaca cgaaagtgaa ctccaccgtc atccccgaga cgcaactgca ggctgaggac     780
```

```
cgcgacaagg acgacattct gttctacacc ctccaggaaa tgacagcagg tgccagtgac     840

tacttctccc tggtgagtgt aaaccgtccc gccctgaggc tggaccggcc cctggacttc     900

tacgagcggc cgaacatgac cttctggctg ctggtgcggg acactccggg ggagaatgtg     960

gaacccagcc acactgccac cgccacacta gtgctgaacg tggtgcccgc cgacctgcgg    1020

cccccgtggt tcctgccctg caccttctca gatggctacg tctgcattca agctcagtac    1080

cacggggctg tccccacggg gcacatactg ccatctcccc tcgtcctgcg tcccggaccc    1140

atctacgctg aggacggaga ccgcggcatc aaccagccca tcatctacag catctttagg    1200

ggaaacgtga atggtacatt catcatccac ccagactcgg gcaacctcac cgtggccagg    1260

agtgtcccca gccccatgac cttccttctg ctggtgaagg gccaacaggc cgaccttgcc    1320

cgctactcag tgacccaggt caccgtggag gctgtggctg cggccgggag cccgccccgc    1380

ttcccccaga gcctgtatcg tggcaccgtg gcgcgtggcg ctggagcggg cgttgtggtc    1440

aaggatgcag ctgcccccttc tcagcctctg aggatccagg ctcaggaccc ggagttctcg    1500

gacctcaact cggccatcac atatcgaatt accaaccact cacacttccg gatggaggga    1560

gaggttgtgc tgaccaccac cacactggca caggcgggag ccttctacgc agaggttgag    1620

gcccacaaca cggtgacctc tggcaccgca accacagtca ttgagataca agtttccgaa    1680

caggagcccc cctccacaga tgtcccccca tccccagagg ctggaggaac aactgggccc    1740

tggaccagca ccacttccga ggtccccaga ccccctgagc cctcccaggg acctccacg    1800

accagctctg ggggaggcac aggccctcat ccaccctctg gcacaactct gaggccacca    1860

acctcgtcca cacccggggg gtccccgggt gcagaaaaca gcacctccca ccaaccagcc    1920

actcccggtg gggacacagc acagacccca aagccaggaa cctctcagcc gatgccccc    1980

ggtgtgggaa ccagcacctc ccaccaacca gccacaccca gtggggggcac agtacagacc    2040

ccagagccag gaacctctca gccgatgccc cccagtatgg gaaccagcac ctcccaccaa    2100

ccagccacac ccggtggggg cacagcacag accccagagg caggaacctc tcagccgatg    2160

cccccgggta tgggaaccag cacctcccac caaccaacca cacccggtgg gggcacagca    2220

cagaccccag agccaggaac ctctcagccg atgcccctca gcaagagcac cccatcttca    2280

ggtggcggcc cctcggagga caagcgcttc tcggtggtgg atatggcggc cctgggcggg    2340

gtgctgggtg cgctgctgct gctggctctc cttggcctcg ccgtccttgt ccacaagcac    2400

tatggcccccc ggctcaagtg ctgctctggc aaagctccgg agccccagcc ccaaggcttt    2460

gacaaccagg cgttcctccc tgaccacaag gccaactggg cgccgtccc cagccccacg    2520

cacgacccca agcccgcgga ggcaccgatg cccgcagagc ccgcaccccc cggccctgcc    2580

tccccaggcg gtgccctga gccccccgca gcggcccgag ctggcggaag ccccacggcg    2640
```

```
gtgaggtcca tcctgaccaa ggagcggcgg ccagagggcg ggtacaaggc tgtctggttt    2700

ggcgaggaca tcgggacgga ggcagacgtg gtcgttctca acgcgcccac cctggacgtg    2760

gatggcgcca gtgactccgg cagcggcgat gagggcgagg gcgcggggag gggtgggggt    2820

ccctacgatg cgcccggtgg tgatgactcc tacatctaag tggcccctcc accctctccc    2880

ccagccgcac gggcactgga ggtctcgctc ccccagcctc cgacccgagg cagaataaag    2940

caaggctccc gaaacccaaa aaaaaaaaaa aaa                                 2973


<210>  36
<211>  1930
<212>  DNA
<213>  human

<400>  36
ggagagagag aggacagaga gcaagtcact cccggctgcc tttttcacct ctgacagagc      60

ccagacacca tgaacgcaag tgaattccga aggagaggga aggagatggt ggattacgtg     120

gccaactaca tggaaggcat tgagggacgc caggtctacc ctgacgtgga gcccgggtac     180

ctgcggccgc tgatccctgc cgctgccct caggagccag acacgtttga ggacatcatc      240

aacgacgttg agaagataat catgcctggg gtgacgcact ggcacagccc ctacttcttc      300

gcctacttcc ccactgccag ctcgtacccg gccatgcttg cggacatgct gtgcgggcc      360

attggctgca tcggcttctc ctgggcggca agcccagcat gcacagagct ggagactgtg      420

atgatggact ggctcgggaa gatgctggaa ctaccaaagg cattttttgaa tgagaaagct    480

ggagaagggg gaggagtgat ccagggaagt gccagtgaag ccaccctggt ggccctgctg     540

gccgctcgga ccaaagtgat ccatcggctg caggcagcgt ccccagagct cacacaggcc     600

gctatcatgg agaagctggt ggcttactca tccgatcagg cacactcctc agtggaaaga     660

gctgggttaa ttggtggagt gaaattaaaa gccatcccct cagatggcaa cttcgccatg     720

cgtgcgtctg ccctgcagga agccctggag agagacaaag cggctggcct gattcctttc     780

tttatggttg ccaccctggg gaccacaaca tgctgctcct ttgacaatct cttagaagtc     840

ggtcctatct gcaacaagga agacatatgg ctgcacgttg atgcagccta cgcaggcagt     900

gcattcatct gccctgagtt ccggcacctt ctgaatggag tggagtttgc agattcattc    960

aactttaatc cccacaaatg gctattggtg aattttgact gttctgccat gtgggtgaaa    1020

aagagaacag acttaacggg agcctttaga ctggaccacca cttacctgaa gcacagccat   1080

caggattcag ggcttatcac tgactaccgg cattggcaga taccactggg cagaagattt    1140

cgctctttga aaatgtggtt tgtatttagg atgtatggag tcaaaggact gcaggcttat    1200

atccgcaagc atgtccagct gtcccatgag tttgagtcac tggtgcgcca ggatccccgc    1260

tttgaaatct gtgtggaagt cattctgggg cttgtctgct ttcggctaaa gggttccaac    1320
```

```
aaagtgaatg aagctcttct gcaaagaata aacagtgcca aaaaaatcca cttggttcca    1380

tgtcacctca gggacaagtt tgtcctgcgc tttgccatct gttctcgcac ggtggaatct    1440

gcccatgtgc agcgggcctg ggaacacatc aaagagctgg cggccgacgt gctgcgagca    1500

gagagggagt aggagtgaag ccagctgcag gaatcaaaaa ttgaagagag atatatctga    1560

aaactggaat aagaagcaaa taaatatcat cctgccttca tggaactcag ctgtctgtgg    1620

cttcccatgt ctttctccaa agccatccag agggttgtga ttttgtctgc ttagtatctc    1680

atcaacaaag aaatattatt tgctaattaa aaagttaatc ttcatggcca tagcttttat    1740

tcattagctg tgattttgt tgattaaaac attatagatt ttcatgttct tgcagtcatc    1800

agaagtggta ggaaagcctc actgatatat tttccagggc aatcaatgtt cacgcaactt    1860

gaaattatat ctgtggtctt caaattgtct tttgtcatgt ggctaaatgc ctaataaaca    1920

attcaagtga                                                           1930
```

```
<210>  37
<211>  1745
<212>  DNA
<213>  human

<400>  37
gcgcccctgg cagccttcaa cgtcggtccc caggcagcat ggtgaggtct gctcccggac    60

cctcgccacc atgtacgtga gctacctcct ggacaaggac gtgagcatgt accctagctc    120

cgtgcgccac tctggcggcc tcaacctggc gccgcagaac ttcgtcagcc ccccgcagta    180

cccggactac ggcggttacc acgtggcggc cgcagctgca gcgcagaact ggacagcgc    240

gcagtccccg gggccatcct ggccggcagc gtatggcgcc ccactccggg aggactggaa    300

tggctacgcg cccggaggcg cggccgccgc caacgccgtg gctcacgcgc tcaacggtgg    360

ctccccggcc gcagccatgg gctacagcag ccccgcagac taccatccgc accaccaccc    420

gcatcaccac ccgcaccacc cggccgccgc gccttcctgc gcttctgggc tgctgcaaac    480

gctcaacccc ggccctcctg ggcccgccgc caccgctgcc gccgagcagc tgtctcccgg    540

cggccagcgg cggaacctgt gcgagtggat gcggaagccg cgcagcagt ccctcggcag    600

ccaagtgaaa accaggacga aagacaaata tcgagtggtg tacacggacc accagcggct    660

ggagctggag aaggagtttc actacagtcg ctacatcacc atccggagga aagccgagct    720

agccgccacg ctggggctct ctgagaggca ggttaaaatc tggtttcaga accgcagagc    780

aaaggagagg aaaatcaaca agaagaagtt gcagcagcaa cagcagcagc agccaccaca    840

gccgcctccg ccgccaccac agcctcccca gcctcagcca ggtcctctga gaagtgtccc    900

agagcccttg agtccggtgt cttccctgca agcctcagtg tctggctctg tccctggggt    960

tctggggcca actggggggg tgctaaaccc caccgtcacc cagtgaccca ccggggtctg    1020
```

```
cagcggcaga gcaattccag gctgagccat gaggagcgtg gactctgcta gactcctcag   1080

gagagacccc tcccctccca cccacagcca tagacctaca gacctggctc tcagaggaaa   1140

aatgggagcc aggagtaaga caagtgggat ttggggcctc aagaaatata ctctcccaga   1200

tttttacttt ttccatctgg ctttttctgc cactgaggag acagaaagcc tccgctgggc   1260

ttcattccgg actggcagaa gcattgcctg gactgaccac accaaccagc ttcatctatc   1320

cgactcttct cttcctagat ctgcaggctg cacctctggc tagagccgag gggagagagg   1380

gactcaaggg aaaggcaagc ttgaggccaa gatggctgct gcctgctcat ggccctcgga   1440

ggtccagctg ggcctcctgc ctccgggcag caaggtttac actgcggaac gcaaaggcag   1500

ctaagataga aagctggact gaccaaagac tgcagaaccc ccaggtggcc ctgcgtcttt   1560

tttctcttcc ctttcccaga ccaggaaagg cttggctggt gtatgcacag ggtgtggtat   1620

gaggggggtgg ttattggact ccaggcctga ccaggggggcc cgaacaggac ttgttagaga   1680

gcctgtcacc agagcttctc tgggctgaat gtatgtcagt gctataaatg ccagagccaa   1740

cctgg                                                               1745
```

<210> 38
<211> 1881
<212> DNA
<213> human

<400> 38
```
ggacctctcc agaatccgga ttgctgaatc ttccctgttg cctagaaggg ctccaaacca    60

cctcttgaca atgggaaact gggtggttaa ccactggttt tcagttttgt ttctggttgt   120

ttggttaggg ctgaatgttt tcctgtttgt ggatgccttc ctgaaatatg agaaggccga   180

caaatactac tacacaagaa aaatccttgg gtcaacattg gcctgtgccc gagcgtctgc   240

tctctgcttg aattttaaca gcacgctgat cctgcttcct gtgtgtcgca atctgctgtc   300

cttcctgagg ggcacctgct cattttgcag ccgcacactg agaaagcaat tggatcacaa   360

cctcaccttc cacaagctgg tggcctatat gatctgccta catacagcta ttcacatcat   420

tgcacacctg tttaactttg actgctatag cagaagccga caggccacag atggctccct   480

tgcctccatt ctctccagcc tatctcatga tgagaaaaag ggggggttctt ggctaaatcc   540

catccagtcc cgaaacacga cagtggagta tgtgacattc accagcattg ctggtctcac   600

tggagtgatc atgacaatag ccttgattct catggtaact tcagctactg agttcatccg   660

gaggagttat tttgaagtct ctggtatac tcaccacctt tttatcttct atatccttgg   720

cttagggatt cacggcattg gtggaattgt ccggggtcaa acagaggaga gcatgaatga   780

gagtcatcct cgcaagtgtg cagagtcttt tgagatgtgg gatgatcgtg actcccactg   840

taggcgccct aagtttgaag ggcatccccc tgagtcttgg aagtggatcc ttgcaccggt   900
```
```
                              Page 50
```

```
cattctttat atctgtgaaa ggatcctccg gttttaccgc tcccagcaga aggttgtgat   960

taccaaggtt gttatgcacc catccaaagt tttggaattg cagatgaaca agcgtggctt  1020

cagcatggaa gtggggcagt atatctttgt taattgcccc tcaatctctc tcctggaatg  1080

gcatcctttt actttgacct ctgctccaga ggaagatttc ttctccattc atatccgagc  1140

agcaggggac tggacagaaa atctcataag ggctttcgaa caacaatatt caccaattcc  1200

caggattgaa gtggatggtc cctttggcac agccagtgag gatgttttcc agtatgaagt  1260

ggctgtgctg gttggagcag gaattggggt cacccccttt gcttctatct tgaaatccat  1320

ctggtacaaa ttccagtgtg cagaccacaa cctcaaaaca aaaagatct atttctactg  1380

gatctgcagg gagacaggtg ccttttcctg gttcaacaac ctgttgactt ccctggaaca  1440

ggagatggag gaattaggca aagtgggttt tctaaactac cgtctcttcc tcaccggatg  1500

ggacagcaat attgttggtc atgcagcatt aaactttgac aaggccactg acatcgtgac  1560

aggtctgaaa cagaaaacct cctttgggag accaatgtgg gacaatgagt tttctacaat  1620

agctacctcc caccccaagt ctgtagtggg agttttctta tgtggccctc ggactttggc  1680

aaagagcctg cgcaaatgct gtcaccgata ttccagtctg gatcctagaa aggttcaatt  1740

ctacttcaac aaagaaaatt tttgagttat aggaataagg acggtaatct gcattttgtc  1800

tctttgtatc ttcagtaatt tacttggtct cgtcaggttt gagcagtcac tttaggataa  1860

gaatgtgcct ctcaagcctt g                                            1881


<210>  39
<211>  3745
<212>  DNA
<213>  human

<400>  39
cgcaaagcaa gtgggcacaa ggagtatggt tctaacgtga ttggggtcat gaagacgttg    60

ctgttggact tggctttgtg gtcactgctc ttccagcccg ggtggctgtc ctttagttcc   120

caggtgagtc agaactgcca caatggcagc tatgaaatca gcgtcctgat gatgggcaac   180

tcagcctttg cagagcccct gaaaaacttg gaagatgcgg tgaatgaggg gctggaaata   240

gtgagaggac gtctgcaaaa tgctggccta aatgtgactg tgaacgctac tttcatgtat   300

tcggatggtc tgattcataa ctcaggcgac tgccggagta gcacctgtga aggcctcgac   360

ctactcagga aaatttcaaa tgcacaacgg atgggctgtg tcctcatagg gccctcatgt   420

acatactcca ccttccagat gtaccttgac acagaattga gctaccccat gatctcagct   480

ggaagttttg gattgtcatg tgactataaa gaaaccttaa ccaggctgat gtctccagct   540

agaaagttga tgtacttctt ggttaacttt tggaaaacca cgatctgcc cttcaaaact   600

tattcctgga gcacttcgta tgtttacaag aatggtacag aaactgagga ctgtttctgg   660
```

```
taccttaatg ctctggaggc tagcgtttcc tatttctccc acgaactcgg ctttaaggtg   720

gtgttaagac aagataagga gtttcaggat atcttaatgg accacaacag gaaaagcaat   780

gtgattatta tgtgtggtgg tccagagttc ctctacaagc tgaagggtga ccgagcagtg   840

gctgaagaca ttgtcattat tctagtggat ctttttcaatg accagtactt ggaggacaat   900

gtcacagccc ctgactatat gaaaaatgtc cttgttctga cgctgtctcc tgggaattcc   960

cttctaaata gctctttctc caggaatcta tcaccaacaa aacgagactt tgctcttgcc  1020

tatttgaatg gaatcctgct ctttggacat atgctgaaga tatttcttga aaatggagaa  1080

aatattacca cccccaaatt tgctcatgct ttcaggaatc tcacttttga agggtatgac  1140

ggtccagtga ccttggatga ctgggggggat gttgacagta ccatggtgct tctgtatacc  1200

tctgtggaca ccaagaaata caaggttctt ttgacctatg atacccacgt aaataagacc  1260

tatcctgtgg atatgagccc cacattcact tggaagaact ctaaacttcc taatgatatt  1320

acaggccggg gccctcagat cctgatgatt gcagtcttca ccctcactgg agctgtggtg  1380

ctgctcctgc tcgtcgctct cctgatgctc agaaaatata gaaaagatta tgaacttcgt  1440

cagaaaaaat ggtcccacat tcctcctgaa aatatctttc ctctggagac caatgagacc  1500

aatcatgtta gcctcaagat cgatgatgac aaaagacgag atacaatcca gagactacga  1560

cagtgcaaat acgacaaaaa gcgagtgatt ctcaaagatc tcaagcacaa tgatggtaat  1620

ttcactgaaa aacagaagat agaattgaac aagttgcttc agattgacta ttacaacctg  1680

accaagttct acggcacagt gaaacttgat accatgatct tcggggtgat agaatactgt  1740

gagagaggat ccctccggga agtttttaaat gacacaattt cctaccctga tggcacattc  1800

atggattggg agtttaagat ctctgtcttg tatgacattg ctaagggaat gtcatatctg  1860

cactccagta agacagaagt ccatggtcgt ctgaaatcta ccaactgcgt agtggacagt  1920

agaatggtgg tgaagatcac tgattttggc tgcaattcca ttttacctcc aaaaaaggac  1980

ctgtggacag ctccagagca cctccgccaa gccaacatct ctcagaaagg agatgtgtac  2040

agctatggga tcatcgcaca ggagatcatt ctgcggaaag aaaccttcta cactttgagc  2100

tgtcgggacc ggaatgagaa gattttcaga gtggaaaatt ccaatggaat gaaacccttc  2160

cgcccagatt tattcttgga aacagcagag gaaaaagagc tagaagtgta cctacttgta  2220

aaaaactgtt gggaggaaga tccagaaaag agaccagatt caaaaaaaat tgagactaca  2280

cttgccaaga tatttggact ttttcatgac caaaaaaatg aaagctatat ggataccttg  2340

atccgacgtc tacagctata ttctcgaaac ctggaacatc tggtagagga aaggacacag  2400

ctgtacaagg cagagaggga cagggctgac agacttaact ttatgttgct ccaaggcta  2460

gtggtaaagt ctctgaagga gaaaggcttt gtggagccgg aactatatga ggaagttaca  2520

atctacttca gtgacattgt aggtttcact actatctgca aatacagcac ccccatggaa  2580
```

```
gtggtggaca tgcttaatga catctataag agttttgacc acattgttga tcatcatgat   2640

gtctacaagg tggaaaccat cggtgatgcg tacatggtgg ctagtggttt gcctaagaga   2700

aatggcaatc ggcatgcaat agacattgcc aagatggcct tggaaatcct cagcttcatg   2760

gggacctttg agctggagca tcttcctggc ctcccaatat ggattcgcat tggagttcac   2820

tctggtccct gtgctgctgg agttgtggga atcaagatgc ctcgttattg tctatttgga   2880

gatacggtca acacagcctc taggatggaa tccactggcc tccctttgag aattcacgtg   2940

agtggctcca ccatagccat cctgaagaga actgagtgcc agttccttta tgaagtgaga   3000

ggagaaacat acttaaaggg aagaggaaat gagactacct actggctgac tgggatgaag   3060

gaccagaaat tcaacctgcc aacccctcct actgtggaga tcaacagcg tttgcaagca   3120

gaattttcag acatgattgc caactcttta cagaaaagac aggcagcagg gataagaagc   3180

caaaaaccca gacgggtagc cagctataaa aaaggcactc tggaatactt gcagctgaat   3240

accacagaca aggagagcac ctattttaa acctaaatga ggtataagga ctcacacaaa   3300

ttaaaataca gctgcactga ggcagcgacc tcaagtgtcc tgaaagctta cattttcctg   3360

agacctcaat gaagcagaaa tgtacttagg cttggctgcc ctgtctggaa catggacttt   3420

cttgcatgaa tcagatgtgt gttctcagtg aaataactac cttccactct ggaaccttat   3480

tccagcagtt gttccaggga gcttctacct ggaaaagaaa agaaatgaat agactatcta   3540

gaacttgaga agatttttatt cttatttcat ttatttttttg tttgtttatt tttatcgttt   3600

ttgtttactg gctttccttc tgtattcata agatttttta aattgtcata attatatttt   3660

aaatacccat cttcattaaa gtatatttaa ctcataattt ttgcagaaaa tatgctatat   3720

attaggcaag aataaaagct aaagg                                         3745
```

<210>   40
<211>   2793
<212>   DNA
<213>   human

<400>   40
```
ctaccccttt gtgagcagtc taggactttg tacacctgtt aagtagggag aaggcagggg    60

aggtggctgg tttaagggga acttgaggga agtagggaag actcctcttg ggacctttgg   120

agtaggtgac acatgagccc agccccagct cacctgccaa tccagctgag gagctcacct   180

gccaatccag ctgaggctgg gcagaggtgg gtgagaagag ggaaaattgc agggacctcc   240

agttgggcca ggccagaagc tgctgtagct ttaaccagac agctcagacc tgtctggagg   300

ctgccagtga caggttaggt ttagggcaga gaagaagcaa gaccatggtg gggaagatgt   360

ggcctgtgtt gtggacactc tgtgcagtca gggtgaccgt cgatgccatc tctgtggaaa   420

ctccgcagga cgttcttcgg gcttcgcagg gaaagagtgt caccctgccc tgcacctacc   480
```

```
acacttccac ctccagtcga gagggactta ttcaatggga taagctcctc ctcactcata    540

cggaaagggt ggtcatctgg ccgttttcaa acaaaaacta catccatggt gagctttata    600

agaatcgcgt cagcatatcc aacaatgctg agcagtccga tgcctccatc accattgatc    660

agctgaccat ggctgacaac ggcacctacg agtgttctgt ctcgctgatg tcagacctgg    720

agggcaacac caagtcacgt gtccgcctgt tggtcctcgt gccaccctcc aaaccagaat    780

gcggcatcga gggagagacc ataattggga acaacatcca gctgacctgc caatcaaagg    840

agggctcacc aacccctcag tacagctgga agaggtacaa catcctgaat caggagcagc    900

ccctggccca gccagcctca ggtcagcctg tctccctgaa gaatatctcc acagacacat    960

cgggttacta catctgtacc tccagcaatg aggaggggac gcagttctgc aacatcacgg   1020

tggccgtcag atctccctcc atgaacgtgg ccctgtatgt gggcatcgcg gtgggcgtgg   1080

ttgcagccct cattatcatt ggcatcatca tctactgctg ctgctgccga gggaaggacg   1140

acaacactga agacaaggag gatgcaaggc cgaaccggga agcctatgag gagccaccag   1200

agcagctaag agaactttcc agagagaggg aggaggagga tgactacagg caagaagagc   1260

agaggagcac tgggcgtgaa tccccggacc acctcgacca gtgacaggcc agcagcagag   1320

ggcggcggag gaagggttag gggttcattc tcccgcttcc tggcctccct tctcctttct   1380

aagccctgtt ctcctgtccc tccatcccag acattgatgg ggacatttct ccccagtgt    1440

cagctgtggg gaacatggct ggcctggtaa gggggtccct gtgctgatcc tgctgacctc   1500

actgtcctgt gaagtaaccc ctcctggctg tgacacctgg tgcgggcctg gccctcactc   1560

aagaccaggc tgcagcctcc acttccctcg tagttggcag gagctcctgg aagcacagcg   1620

ctgagcatgg ggcgctccca ctcagaactc tccagggagg cgatgccagc cttggggggt   1680

ggggctgtc ctgctcacct gtgtgcccag cacctggagg ggcaccaggt ggagggtttg   1740

cactccacac atctttcttg aatgaatgaa agaataagtg agtatgcttg ggccctgcat   1800

tggcctggcc tccagctccc actccctttc caacctcact tcccgtagct gccagtatgt   1860

tccaaaccct cctgggaagg ccacctccca ctcctgctgc acaggccctg gggagctttt   1920

gcccacacac tttccatctc tgcctgtcaa tatcgtacct gtccctccag gcccatctca   1980

aatcacaagg atttctctaa ccctatccta attgtccaca tacgtggaaa caatcctgtt   2040

actctgtccc acgtccaatc atgggccaca aggcacagtc ttctgagcga gtgctctcac   2100

tgtattagag cgccagctcc ttggggcagg gcctgggcct catggctttt gctttccctg   2160

aagccctagt agctggcgcc catcctagtg ggcacttaag cttaattggg gaaactgctt   2220

tgattggttg tgccttccct tctctggtct ccttgagatg atcgtagaca cagggatgat   2280

tcccacccaa acccacgtat tcattcagtg agttaaacac gaattgattt aaagtgaaca   2340
```

Page 54

```
cacacaaggg agcttgcttg cagatggtct gagttcttgt gtcctggtaa ttcctctcca    2400

ggccagaata attggcatgt ctcctcaacc cacatggggt tcctggttgt tcctgcatcc    2460

cgatacctca gccctggccc tgcccagccc atttgggctc tggtttttctg gtggggctgt    2520

cctgctgccc tcccacagcc tccttctgtt tgtcgagcat ttcttctact cttgagagct    2580

caggcagcgt tagggctgct taggtctcat ggaccagtgg ctggtctcac ccaactgcag    2640

tttactattg ctatcttttc tggatgatca gaaaaataat tccataaatc tattgtctac    2700

ttgcgatttt ttaaaaaatg tatattttta tatatattgt taaàtccttt gcttcattcc    2760

aaatgctttc agtaataata aaattgtggg tgg                                 2793
```

<210> 41
<211> 1734
<212> DNA
<213> human

<400> 41

```
ggacctctcc agaatccgga ttgctgaatc ttccctgttg cctagaaggg ctccaaacca     60

cctcttgaca atgggaaact gggtggttaa ccactggttt tcagttttgt ttctggttgt    120

ttggttaggg ctgaatgttt tcctgtttgt ggatgccttc ctgaaatatg agaaggccga    180

caaatactac tacacaagaa aaatccttgg gtcaacattg gcctgtgccc gagcgtctgc    240

tctctgcttg aattttaaca gcacgctgat cctgcttcct gtgtgtcgca atctgctgtc    300

cttcctgagg ggcacctgct cattttgcag ccgcacactg agaaagcaat tggatcacaa    360

cctcaccttc cacaagctgg tggcctatat gatctgccta catacagcta ttcacatcat    420

tgcacacctg tttaactttg actgctatag cagaagccga caggccacag atggctccct    480

tgcctccatt ctctccagcc tatctcatga tgagaaaaag ggggggttctt ggctaaatcc    540

catccagtcc cgaaacacga cagtggagta tgtgacattc accagcattg ctggtctcac    600

tggagtgatc atgacaatag ccttgattct catggtaact tcagctactg agttcatccg    660

gaggagttat tttgaagtct tctggtatac tcaccacctt tttatcttct atatccttgg    720

cttagggatt cacggcattg gtggaattgt ccggggtcaa acagaggaga gcatgaatga    780

gagtcatcct cgcaagtgtg cagagtcttt tgagatgtgg gatgatcgtg actcccactg    840

taggcgccct aagtttgaag ggcatccccc tgagtcttgg aagtggatcc ttgcaccggt    900

cattctttat atctgtgaaa ggatcctccg gttttaccgc tcccagcaga aggttgtgat    960

taccaaggtt gttatgcacc catccaaagt tttggaattg cagatgaaca agcgtggctt   1020

cagcatggaa gtggggcagt atatctttgt taattgcccc tcaatctctc tcctggaatg   1080

gcatcctttt actttgacct ctgctccaga ggaagatttc ttctccattc atatccgagc   1140

agcaggggac tggacagaaa atctcataag ggctttcgaa caacaatatt caccaattcc   1200
```

```
caggattgaa gtggatggtc cctttggcac agccagtgag gatgttttcc agtatgaagt   1260

ggctgtgctg gttggagcag gaattggggt cacccccttt gcttctatct tgaaatccat   1320

ctggtacaaa ttccagtgtg cagaccacaa cctcaaaaca aaaaaggttg gtcatgcagc   1380

attaaacttt gacaaggcca ctgacatcgt gacaggtctg aaacagaaaa cctcctttgg   1440

gagaccaatg tgggacaatg agttttctac aatagctacc tcccacccca agtctgtagt   1500

gggagttttc ttatgtggcc ctcggacttt ggcaaagagc ctgcgcaaat gctgtcaccg   1560

atattccagt ctggatccta gaaaggttca attctacttc aacaaagaaa attttgagt   1620

tataggaata aggacggtaa tctgcatttt gtctctttgt atcttcagta atttacttgg   1680

tctcgtcagg tttgagcagt cactttagga taagaatgtg cctctcaagc cttg          1734
```

<210> 42
<211> 3941
<212> DNA
<213> human

<400> 42
```
accatctact ccacagtcag ctcatccaca actgccatca cctcacctttt cactaccgca    60

gagactgggg tgacttccac accttcatcc ccatcttctc tgagtacaga catcccgacc   120

acatccctaa gaactctcac cccattatct ttgagcacca gcacttcatt gactacaacc   180

acagaccttc cctctatacc cactgatatc agtagcttac caaccccaat acacatcatt   240

tcatcttctc cctccatcca aagtacagaa acctcatccc ttgtgggcac cacctctccc   300

accatgtcca ctgtgagagc gaccctcaga agtactgaga acaccccaat cagttccttt   360

agcacaagta ttgttgttac acctgaaacc ccaacaacac aggcccctcc tgtactgatg   420

tctgccactg ggacccaaac atcccctgta cctactactg tcacctttgg aagtatggat   480

tcctctacgt ccactcttca tactcttact ccatcaacag ccttgagcaa gatcatgtca   540

acatcacagt ttcctattcc tagcacacat tcctccaccc ttcaaacaac tccttcaatc   600

ccctctttgc aaacttcact cacatctaca agtgagttca ctacagaatc tttcactagg   660

ggaagtacgt ctacaaatgc aatcttgact tcttttagta ccatcatctg gtcctcaaca   720

cccactatta tcatgtcctc ttctccatct tctgccagca taactccagt gttcgctact   780

accattcatt ctgttccttc gtcaccatac attttcagta cagaaaatgt gggctccgct   840

tctatcacag cctttcctag tctctcttcc tcttcaacta ccagcacttc tccaaccagc   900

tcctctctga ccacagctct cactgaaata accccctttt cttatatttc ccttccctcc   960

accacaccct gtccaggaac tataacaatt accatagtcc ctgcctcccc cactgatcca   1020

tgtgttgaaa tggatcccag cactgaagct acttctcctc ccaccactcc attaacagtc   1080

tttcccttta ctactgaaat ggtcacctgt cctagctcca tcagtatgca aactactctt   1140
```

```
gctacacata tggacacttc ttccatgacg ccagaaagtg agtccagcat catacctaat   1200

gcttccagtt ccactggcac tgggactgta cccacaaaca cagttttcac aagtactcga   1260

ctgcccacca gtgagacctg gctgagcaac aactctgtga tccccacacc tcttcctggc   1320

gtctctacca tcccgctcac catgaaacca agcagtagcc tcccgaccat cctgaggact   1380

tcaagcaagt caacacaccc atccccaccc accgccagga cttcagagac atcagtggcc   1440

actacccaga ctcctaccac ccttacaacg cgcaggacaa ctcccatcac ttcttggatg   1500

accacacagt ccacgttgac caccactgca ggcacctgtg acaatggtgg cacctgggaa   1560

cagggccagt gtgcttgcct tccggggttt tctggggacc gctgtcagct ccagaccaga   1620

tgccagaacg ggggccagtg ggatggcctc aagtgccagt gccccagcac cttctatggt   1680

tccagttgtg agtttgctgt ggaacaggtg gatctagatg tagtggagac cgaggtgggc   1740

atggaagtgt ctgtggatca gcagttctcg ccggacctca atgacaacac ttcccaggcc   1800

tacagggatt tcaacaagac cttctggaat cagatgcaga agatttttgc agacatgcag   1860

ggcttcacct tcaagggtgt ggagatcctg tccctgagga atggcagcat cgtggtggac   1920

tacctggtcc tgctggagat gcccttcagc ccccagctgg agagcgagta tgagcaggtg   1980

aagaccacgc tgaaggaggg gctccagaac gccagccagg atgcgaacag ctgccaggac   2040

tcccagaccc tgtgttttaa gcctgactcc atcaaggtga acaacaacag caagacagag   2100

ctgaccccgg aagccatctg ccgccgcgcc gctcccacgg gctatgaaga gttctacttc   2160

cctctggtgg aggccacccg gctccgctgt gtcaccaaat gcacgtcggg cgtggacaac   2220

gccatcgact gtcaccaggg ccagtgcgtt ctagagacga gcggtcccgc gtgtcgctgc   2280

tactccaccg acacgcactg gttctctggc ccgcgctgcg aggtggccgt ccactggagg   2340

gcgctggtcg ggggcctgac ggccggcgcc gcgctgctgg tgctgctgct gctggcgctg   2400

ggcgtccggg cggtgcgctc cggatggtgg ggcggccagc gccgaggccg gtcctgggac   2460

caggacagga aatggttcga gacctgggat gaggaagtcg tgggcacttt ttcaaactgg   2520

ggtttcgagg acgacggaac agacaaggat acaaatttcc atgtggcctt ggagaacgtg   2580

gacaccacta tgaaggtgca catcaagaga cccgagatga cctcgtcctc agtgtgagcc   2640

ctgcggggcc ccttcaccac cccctccgcc ctgccccgga cacaagggtc tgcattgcgt   2700

ccatttcaag aggtggcccc aggacgcggg cagcccaggc tcctgctgtt cttgggcaag   2760

atgagactgt cccccaaat cccatccttc tccttccaac ttggctgaaa cccacctgga   2820

gacgcagttc acgtccaggc tcttccactg tggaatcttg ggcaagtcag taacgagcct   2880

cagtttcctc acctgcaaaa cgggtacagc attcctgtat gatagctcac gccgttgttg   2940

tgaaaaccac atagacttgg tcaattctcg gtcctactct gccctcccgt ctcagccctc   3000

gtgttgccat tgcctctctc ggatcctcca atcctcacgt ccttcacctg gtctctggcc   3060
```

```
ctggttctta ttttctctca attccctact gcctgtttct tactttgaac ctggaggcag    3120

cctgcagccc catcccatct cctgccctct cctgatctaa ctccctgctg catctcttgc    3180

tctcattcct tagacgtcct ccccttttga ccccgttcct tcatccatcc tgcaccccag    3240

tcccccagcc ctaaatcctc cctcctctcc tcacatcctg gtccctagca aggtatagat    3300

agcctctgtg tcttaggata ccccgggtgc tgttccctcg gtcaccctgt tgcccagttc    3360

cccgtttctc ttgctctcat tccttgtatc ttctcccctt ctgagcccgt ccattcatcg    3420

gttctgcccc cgactccccc agccctaaat accccagctc ctaattcccc cctcaccccg    3480

ttgctcaatt ccccgtttct cttgctctca ttccttgtat cttctcccct tctgagcctg    3540

tccattcatc ggtggttctg cccctactcc cccagcccta ataccccag ctgctgttcc     3600

tccccatcac ccagccaccg gattctccat tcaccccttt ctctcacccc tggagccccg    3660

tgggtggggg cagggcatga gttccccagt ccccaaggaa aggcagcccc ctcagtctcc    3720

ctcctcctca ttcccttcca tctccctccc ctctgccttt taaacccatc ccctccgatt    3780

cccctcctcc cccctctctc cctggtgtca actcgattcc tgcggtaact ctgagccctg    3840

aaatcctcag tctccttggc ggggaagatt ggctttgggg acaggaagtc ggcacatctc    3900

caggtctcca tgtgcacaat atagagttta ttgtaaaaag c                        3941
```

```
<210>   43
<211>   1126
<212>   DNA
<213>   human

<400>   43
cagatactct gacccatgga tcccctgggc ccggccaagc cacagtggtc gtggcgctgc     60

tgtctgacca cgctgctgtt tcagctgctg atggctgtgt gtttcttctc ctatctgcgt    120

gtgtctcaag acgatcccac tgtgtaccct aatgggtccc gcttcccaga cagcacaggg    180

accccgccc actccatccc cctgatcctg ctgtggacgt ggcctttaa caaacccata      240

gctctgcccc gctgctcaga gatggtgcct ggcacggctg actgcaacat cactgccgac    300

cgcaaggtgt atccacaggc agacgcggtc atcgtgcacc accgagaggt catgtacaac    360

cccagtgccc agctcccacg ctccccgagg cggcaggggc agcgatggat ctggttcagc    420

atggagtccc caagccactg ctggcagctg aaagccatgg acggatactt caatctcacc    480

atgtcctacc gcagcgactc cgacatcttc acgccctacg ctggctgga ccgtggtcc      540

ggccagcctg cccacccacc gctcaacctc tcggccaaga ccgagctggt ggcctgggca    600

gtgtccaact ggggggccaaa ctccgccagg gtgcgctact accagagcct gcaggcccat    660

ctcaaggtgg acgtgtacgg acgctcccac aagcccctgc cccagggaac catgatggag    720

acgctgtccc ggtacaagtt ctatctggcc ttcgagaact ccttgcaccc cgactacatc    780
```

```
accgagaagc tgtggaggaa cgccctggag gcctgggccg tgcccgtggt gctgggcccc    840

agcagaagca actacgagag gttcctgccg cccgacgcct tcatccacgt ggacgacttc    900

cagagcccca aggacctggc ccggtacctg caggagctgg acaaggacca cgcccgctac    960

ctgagctact ttcgctggcg ggagacgctg cggcctcgct ccttcagctg ggcactcgct   1020

ttctgcaagg cctgctggaa actgcaggag gaatccaggt accagacacg cggcatagcg   1080

gcttggttca cctgagaggc ccggcatggg gcctgggctg ccaggg                  1126
```

```
<210>  44
<211>  6129
<212>  DNA
<213>  human

<400>  44
aattggaagc aaatgacatc acagcaggtc agagaaaaag ggttgagcgg caggcaccca     60

gagtagtagg tctttggcat taggagcttg agcccagacg ccctagcag ggaccccagc     120

gcccgagaga ccatgcagag gtcgcctctg gaaaaggcca gcgttgtctc caaacttttt    180

ttcagctgga ccagaccaat tttgaggaaa ggatacagac agcgcctgga attgtcagac    240

atataccaaa tcccttctgt tgattctgct gacaatctat ctgaaaaatt ggaaagagaa    300

tgggatagag agctggcttc aaagaaaaat cctaaactca ttaatgccct tcggcgatgt    360

tttttctgga gatttatgtt ctatggaatc tttttatatt taggggaagt caccaaagca    420

gtacagcctc tcttactggg aagaatcata gcttcctatg acccggataa caaggaggaa    480

cgctctatcg cgatttatct aggcataggc ttatgccttc tctttattgt gaggacactg    540

ctcctacacc cagccatttt tggccttcat cacattggaa tgcagatgag aatagctatg    600

tttagtttga tttataagaa gactttaaag ctgtcaagcc gtgttctaga taaaataagt    660

attggacaac ttgttagtct cctttccaac aacctgaaca aatttgatga aggacttgca    720

ttggcacatt tcgtgtggat cgctcctttg caagtggcac tcctcatggg gctaatctgg    780

gagttgttac aggcgtctgc cttctgtgga cttggtttcc tgatagtcct tgcccttttt    840

caggctgggc tagggagaat gatgatgaag tacagagatc agagagctgg gaagatcagt    900

gaaagacttg tgattacctc agaaatgatt gaaaatatcc aatctgttaa ggcatactgc    960

tgggaagaag caatggaaaa aatgattgaa aacttaagac aaacagaact gaaactgact   1020

cggaaggcag cctatgtgag atacttcaat agctcagcct tcttcttctc agggttcttt   1080

gtggtgtttt tatctgtgct tcccctatgca ctaatcaaag gaatcatcct ccggaaaata   1140

ttcaccacca tctcattctg cattgttctg cgcatggcgg tcactcggca atttccctgg   1200

gctgtacaaa catggtatga ctctcttgga gcaataaaca aaatacagga tttcttacaa   1260

aagcaagaat ataagacatt ggaatataac ttaacgacta cagaagtagt gatggagaat   1320
```

```
gtaacagcct tctgggagga gggatttggg gaattatttg agaaagcaaa acaaaacaat    1380

aacaatagaa aaacttctaa tggtgatgac agcctcttct tcagtaattt ctcacttctt    1440

ggtactcctg tcctgaaaga tattaatttc aagatagaaa gaggacagtt gttggcggtt    1500

gctggatcca ctggagcagg caagacttca cttctaatga tgattatggg agaactggag    1560

ccttcagagg gtaaaattaa gcacagtgga agaatttcat tctgttctca gttttcctgg    1620

attatgcctg gcaccattaa agaaaatatc atctttggtg tttcctatga tgaatataga    1680

tacagaagcg tcatcaaagc atgccaacta gaagaggaca tctccaagtt tgcagagaaa    1740

gacaatatag ttcttggaga aggtggaatc acactgagtg gaggtcaacg agcaagaatt    1800

tctttagcaa gagcagtata caaagatgct gatttgtatt tattagactc tccttttgga    1860

tacctagatg ttttaacaga aaaagaaata tttgaaagct·gtgtctgtaa actgatggct    1920

aacaaaacta ggattttggt·cacttctaaa atggaacatt taaagaaagc tgacaaaata    1980

ttaattttga atgaaggtag cagctatttt tatgggacat tttcagaact ccaaaatcta    2040

cagccagact ttagctcaaa actcatggga tgtgattctt tcgaccaatt tagtgcagaa    2100

agaagaaatt caatcctaac tgagacctta caccgtttct cattagaagg agatgctcct    2160

gtctcctgga cagaaacaaa aaaacaatct tttaaacaga ctggagagtt tggggaaaaa    2220

aggaagaatt ctattctcaa tccaatcaac tctatacgaa aattttccat tgtgcaaaag    2280

actcccttac aaatgaatgg catcgaagag gattctgatg agcctttaga gagaaggctg    2340

tccttagtac cagattctga gcagggagag gcgatactgc ctcgcatcag cgtgatcagc    2400

actggcccca cgcttcaggc acgaaggagg cagtctgtcc tgaacctgat gacacactca    2460

gttaaccaag gtcagaacat tcaccgaaag acaacagcat ccacacgaaa agtgtcactg    2520

gcccctcagg caaacttgac tgaactggat atatattcaa gaaggttatc tcaagaaact    2580

ggcttggaaa taagtgaaga aattaacgaa gaagacttaa aggagtgcct ttttgatgat    2640

atggagagca taccagcagt gactacatgg aacacatacc ttcgatatat tactgtccac    2700

aagagcttaa tttttgtgct aatttggtgc ttagtaattt ttctggcaga ggtggctgct    2760

tctttggttg tgctgtggct ccttggaaac actcctcttc aagacaaagg gaatagtact    2820

catagtagaa ataacagcta tgcagtgatt atcaccagca ccagttcgta ttatgtgttt    2880

tacatttacg tgggagtagc cgacactttg cttgctatgg gattcttcag aggtctacca    2940

ctggtgcata ctctaatcac agtgtcgaaa attttacacc acaaaatgtt acattctgtt    3000

cttcaagcac ctatgtcaac cctcaacacg ttgaaagcag gtgggattct taatagattc    3060

tccaaagata tagcaatttt ggatgacctt ctgcctctta ccatatttga cttcatccag    3120

ttgttattaa ttgtgattgg agctatagca gttgtcgcag ttttacaacc ctacatcttt    3180
```

Page 60

```
gttgcaacag tgccagtgat agtggctttt attatgttga gagcatattt cctccaaacc    3240

tcacagcaac tcaaacaact ggaatctgaa ggcaggagtc caattttcac tcatcttgtt    3300

acaagcttaa aaggactatg gacacttcgt gccttcggac ggcagcctta ctttgaaact    3360

ctgttccaca aagctctgaa tttacatact gccaactggt tcttgtacct gtcaacactg    3420

cgctggttcc aaatgagaat agaaatgatt tttgtcatct tcttcattgc tgttaccttc    3480

atttccattt taacaacagg agaaggagaa ggaagagttg gtattatcct gactttagcc    3540

atgaatatca tgagtacatt gcagtgggct gtaaactcca gcatagatgt ggatagcttg    3600

atgcgatctg tgagccgagt ctttaagttc attgacatgc aacagaagg taaacctacc    3660

aagtcaacca aaccatacaa gaatggccaa ctctcgaaag ttatgattat tgagaattca    3720

cacgtgaaga aagatgacat ctggccctca gggggccaaa tgactgtcaa agatctcaca    3780

gcaaaataca cagaaggtgg aaatgccata ttagagaaca tttccttctc aataagtcct    3840

ggccagaggg tgggcctctt gggaagaact ggatcaggga agagtacttt gttatcagct    3900

tttttgagac tactgaacac tgaaggagaa atccagatcg atggtgtgtc ttgggattca    3960

ataactttgc aacagtggag gaaagccttt ggagtgatac cacagaaagt atttattttt    4020

tctggaacat ttagaaaaaa cttggatccc tatgaacagt ggagtgatca agaaatatgg    4080

aaagttgcag atgaggttgg gctcagatct gtgatagaac agtttcctgg gaagcttgac    4140

tttgtccttg tggatggggg ctgtgtccta agccatggcc acaagcagtt gatgtgcttg    4200

gctagatctg ttctcagtaa ggcgaagatc ttgctgcttg atgaacccag tgctcatttg    4260

gatccagtaa cataccaaat aattagaaga actctaaaac aagcatttgc tgattgcaca    4320

gtaattctct gtgaacacag gatagaagca atgctggaat gccaacaatt tttggtcata    4380

gaagagaaca aagtgcggca gtacgattcc atccagaaac tgctgaacga gaggagcctc    4440

ttccggcaag ccatcagccc ctccgacagg gtgaagctct tccccaccg gaactcaagc    4500

aagtgcaagt ctaagcccca gattgctgct ctgaaagagg agacagaaga agaggtgcaa    4560

gatacaaggc tttagagagc agcataaatg ttgacatggg acatttgctc atggaattgg    4620

agctcgtggg acagtcacct catggaattg gagctcgtgg aacagttacc tctgcctcag    4680

aaaacaagga tgaattaagt ttttttttaa aaaagaaaca tttggtaagg ggaattgagg    4740

acactgatat gggtcttgat aaatggcttc ctggcaatag tcaaattgtg tgaaaggtac    4800

ttcaaatcct tgaagattta ccacttgtgt tttgcaagcc agattttcct gaaaaccctt    4860

gccatgtgct agtaattgga aaggcagctc taaatgtcaa tcagcctagt tgatcagctt    4920

attgtctagt gaaactcgtt aatttgtagt gttggagaag aactgaaatc atacttctta    4980

gggttatgat taagtaatga taactggaaa cttcagcggt ttatataagc ttgtattcct    5040

ttttctctcc tctccccatg atgtttagaa acacaactat attgtttgct aagcattcca    5100
```

```
actatctcat ttccaagcaa gtattagaat accacaggaa ccacaagact gcacatcaaa    5160

atatgcccca ttcaacatct agtgagcagt caggaaagag aacttccaga tcctggaaat    5220

cagggttagt attgtccagg tctaccaaaa atctcaatat ttcagataat cacaatacat    5280

cccttacctg ggaaagggct gttataatct ttcacagggg acaggatggt tcccttgatg    5340

aagaagttga tatgcctttt cccaactcca gaaagtgaca agctcacaga cctttgaact    5400

agagtttagc tggaaaagta tgttagtgca aattgtcaca ggacagccct tctttccaca    5460

gaagctccag gtagagggtg tgtaagtaga taggccatgg gcactgtggg tagacacaca    5520

tgaagtccaa gcatttagat gtataggttg atggtggtat gttttcaggc tagatgtatg    5580

tacttcatgc tgtctacact aagagagaat gagagacaca ctgaagaagc accaatcatg    5640

aattagtttt atatgcttct gttttataat tttgtgaagc aaaatttttt ctctaggaaa    5700

tatttatttt aataatgttt caaacatata ttacaatgct gtattttaaa agaatgatta    5760

tgaattacat ttgtataaaa taattttat atttgaaata ttgacttttt atggcactag    5820

tatttttatg aaatattatg ttaaaactgg gacaggggag aacctagggt gatattaacc    5880

aggggccatg aatcaccttt tggtctggag ggaagccttg gggctgatcg agttgttgcc    5940

cacagctgta tgattcccag ccagacacag cctcttagat gcagttctga agaagatggt    6000

accaccagtc tgactgtttc catcaagggt acactgcctt ctcaactcca aactgactct    6060

taagaagact gcattatatt tattactgta agaaaatatc acttgtcaat aaaatccata    6120

catttgtgt                                                           6129
```

```
<210>   45
<211>   330
<212>   DNA
<213>   human

<400>   45
gcggccgcag gtacccgggc tccacgtcag ggtagacctg gcgtccctca atgccttcca      60

tgtagttggc cacgtaatcc accatctcct tccctctcct tcggaattca cttgcgttca     120

tggtgtctgg gctctgtcag aggtgaaaaa tgctggaaat tcgaattcct tacagggcta     180

ctctccttga tgggattctc caactttggg gactgaagag catgtggaga agctgctgag     240

gcactcggca ctgagacagt cactcttctt gaaactccaa gccacacgtt tccctcttct     300

tgcatttcca gccacatgtg cccctcgtgc                                      330
```

```
<210>   46
<211>   2400
<212>   DNA
<213>   human

<400>   46
```

```
ctgtagggga ggatattttg attgaacaca ggcttgacag aatcttcttt tcttcttaga      60

aatcctagaa aacagaaagc aacaggaaga tgtcttattg ggaactaccc ccatcaactt     120

caccatgagt caaacaagga agaaaacttc ctcagaagga gaaactaagc cccagacttc     180

aactgtcaac aaatttctca ggggctccaa tgctgaaagc agaaaagagg acaatgacct     240

taaaacaagt gattcccaac ccagcgactg gatacagaag acagccacct cagagactgc     300

taagcctctc agttcagaaa tggaatggag atccagtatg gagaaaaatg agcatttcct     360

gcagaagctg ggcaaaaagg ctgtcaacaa gtgtctagat ttgaataact gtggattaac     420

aacagcggac atgaaagaaa tgggagaagc atttgagatg attcctgaac ttgaagagct     480

aaatttgtct tggaacagta aagtgggagg aaatttgcct ctgatccttc agaagttcca     540

aaaagggagc aagatacaaa tgattgagct tgtggattgc tccctcacgt cagaagatgg     600

gacatttctg ggtcaactgc tacctatgct gcaaagtctc gaagtacttg atctttccat     660

taacagagac attgttggca gtctgaacag tattgctcag ggattaaaaa gcacctcaaa     720

tctgaaagta ctgaagttac attcatgtgg attatcacaa aagagtgtca aaatattgga     780

tgctgctttt aggtatttgg gtgagctgag gaaattagat ctttcctgca ataaggatct     840

aggtggaggt tttgaagact cgccggctca gttggtcatg ctaaagcatc tacaagtcct     900

agatcttcac cagtgctcac taacagcaga tgacgtgatg tcactgaccc aggtcattcc     960

tttactttca aatcttcaag aattggattt atcagccaac aaaaagatgg gcagttcttc    1020

tgaaaactta ctcagcaggc tccgattttt accagcattg aagtcattag ttatcaacaa    1080

ctgtgctttg gagagtgaga cttttacagc tcttgctgaa gcctctgttc acctctctgc    1140

tctggaagta ttcaaccttt cttggaacaa gtgtgttggt ggcaacttgg agctgcttct    1200

ggaaacacta aagctttcca tgtctcttca agtgctgagg ctgagcagct gttccctggt    1260

gacagaggat gtggctctcc tggcatcggt catacagacg ggtcatctgg ccaaactgca    1320

aaagctggac ctgagctaca atgacagcat ctgtgatgca gggtggacca tgttctgcca    1380

aaacgtgcgg ttcctcaaag agctaatcga gctggatatt agccttcgac catcaaattt    1440

tcgagattgt ggacaatggt ttagacactt gttatatgct gtgaccaagc ttcctcagat    1500

cactgagata ggaatgaaaa gatggattct cccagcttca caggaggaag aactagaatg    1560

ctttgaccaa gaaaaaaaaa agaagcattc actttgacca tggtgggttt cagtaaactg    1620

atttcccatg tcctactaag ctacaaacca ttctccaaag gaaaagaaca tgaacgaatt    1680

ccagagtcat gaactgaatt tcaacttctg ggccatttaa tgggacttat attacaagag    1740

ctttgtaaat atatatatat attacatata tatatgtaat atacatatat acacatatat    1800

ataatataca tatataatac acatatatat gtaaatatat atataatatc taatatgagc    1860

atgccattat tctctgtcta tgaaacaaaa atggcatttt tcaatggatt tgttttggat    1920
```

```
atataattag ttcatttgct gtttagaagc cttgccaaaa gtgtttagat tttggtactg   1980

caactgcttt cctcttgccc agaaatgttt tgcctcttct tttcctacaa gttaaatgtt   2040

ctaaatataa aggggtatgt gtgtgtgtgt gtaattctaa tgtgaaaggc actagctgtc   2100

taatagtttc atgtatcatt actattacta tatgtatctt aatgtagtct atgtaggttt   2160

ttatcagaaa gtgtaccttt ctatggttta ttattttata ttctggtgcc ttttatctca   2220

gatataaacc atgaacagta atgatagtca ctgacatata aatcttagta aaaagtgatt   2280

aaaaatctaa aactcagtat gaaaaacata tcttgttaga ataaattaaa accttttatt   2340

gtttaaaaaa ttgttaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa   2400
```

```
<210>  47
<211>  2308
<212>  DNA
<213>  human

<400>  47
aagccacttt gacaacgttt ctgagccagg ggtgaccatg acctgctgcg aaggatggac     60

atcctgcaat ggattcagcc tgctggttct actgctgtta ggagtagttc tcaatgtgat    120

acctctaatt gtcagcttag ttgaggaaga ccaattttct caaaacccca tctcttgctt    180

tgagtggtgg ttcccaggaa ttataggagc aggtctgatg gccattccag caacaacaat    240

gtccttgaca gcaagaaaaa gagcgtgctg caacaacaga actggaatgt ttctttcatc    300

acttttcagt gtgatcacag tcattggtgc tctgtattgc atgctgatat ccatccaggc    360

tctcttaaaa ggtcctctca tgtgtaattc tccaagcaac agtaatgcca attgtgaatt    420

ttcattgaaa aacatcagtg acattcatcc agaatccttc aacttgcagt ggttttttcaa    480

tgactcttgt gcacctccta ctggtttcaa taaacccacc agtaacgaca ccatggcgag    540

tggctggaga gcatctagtt ccacttcga ttctgaagaa aacaaacata ggcttatcca    600

cttctcagta ttttttaggtc tattgcttgt tggaattctg gaggtcctgt ttgggctcag    660

tcagatagtc atcggtttcc ttggctgtct gtgtggagtc tctaagcgaa gaagtcaaat    720

tgtgtagttt aatgggaata aaatgtaagt atcagtagtt tgaattaatt tgagaagtac    780

acttgttttc aaagtcatct ttgagatgat ttaaaaaatc aacccttcac gtagaaagca    840

cgttgtaaat gcataacact ctcatatcag tggttgattt gggaaaggtg gagagaattt    900

tcaattagtt ttgtgttgta ctattcaaat tttttacctc ttcactgtgt gtagagaaag    960

gagaagggaa ggaggatgag aaggaacgga agtcatcctg aaaataaaag tacaggactt   1020

tttttttttt ttttgagac agggtctcaa aaaaggctgg agtacagtag tacagtggtg   1080

ctatctcagc ttactgcagc ctcaacctcc tgggctcagg tgattctccc atctcagcct   1140

ccctagtagc tgggactaca ggtgcgtgcc actatgccaa gctaattttt gtattttttag   1200
```

```
tagagatggg ggttttccat attgcccagg ctggtcccga actcatggac tcaagtgatc   1260

tgcctgcctc agcctcctaa agtgctgcga ttacaggcat gagccatcgc gcctaaagga   1320

caggaccttt ttattgtatt tctttaaaga ataaatacat aacctgaatg caatcaagtc   1380

tttagatcta attctcagct tgcagggaac actaggacaa atccaaaaag tgggtcagcg   1440

ggcacagaat ggcccaattt tcaacaggaa aatgttataa aagaaaaata ttttgaggg    1500

aactgttata gattaagaga atagaggcat gtttcagcta aacacatgta aactttgtca   1560

gagataattg ggaggagtat gtagaagaat cggattattg ttaattttgg taggtctgat   1620

aatggtttta tagtataaag gctgagtacc ccttatccaa aatgattaag atcagaagtg   1680

ttttggcttt cacatttttt tggattttgg aattttgcct ataataatga gacatcttgg   1740

ggatgggatg caagtctaac cacaaaattc atttatgtct catacacact ttgaacacct   1800

ggcctgaagg taatttcaca caatatttta aataactttg tgcatgaaac acaattttga   1860

ctgcattttg actgcaactc atcacatgag gtcaggtatg gaattttcca cttgtggtgt   1920

tacgttactg gctcaaaaag ttttggatct cggagcattc tggattttga attttttggat  1980

tagtgatgct caacctgtat acagaaatgt cctcattttt aaaaaaagaa atgcatattt   2040

atatgttta aaattacttc aaccaaaagc aacgggaga tgtttactgt tatatttagg    2100

tgacaggtac atggcaattc attatacct cctattttcc tatgtttaca ttattcatta    2160

attaaaaaac aatacctaga aaaacccaag actttcaaaa gctatttct atatgtgcca    2220

atctttaaaa aacaggataa caagggtatt tatcacatta aaatgttgta aaacagcaaa   2280

gctaaaatct aaaaaaaaa aaaaaaa                                        2308
```

<210> 48
<211> 2880
<212> DNA
<213> human

<400> 48
```
tgctgctctc cgcccgcgtc cggctcgtgg cccccctactt cgggcaccat ggacacctcc   60

cggctcggtg tgctcctgtc cttgcctgtg ctgctgcagc tggcgaccgg gggcagctct   120

cccaggtctg gtgtgttgct gaggggctgc cccacacact gtcattgcga gcccgacggc   180

aggatgttgc tcagggtgga ctgctccgac ctggggctct cggagctgcc ttccaacctc   240

agcgtcttca cctcctacct agacctcagt atgaacaaca tcagtcagct gctcccgaat   300

cccctgccca gtctccgctt cctggaggag ttacgtcttg cgggaaacgc tctgacatac   360

attcccaagg gagcattcac tggcctttac agtcttaaag ttcttatgct gcagaataat   420

cagctaagac acgtacccac agaagctctg cagaatttgc gaagccttca atccctgcgt   480

ctggatgcta accacatcag ctatgtgccc ccaagctgtt tcagtggcct gcattccctg   540
```

```
aggcacctgt ggctggatga caatgcgtta acagaaatcc ccgtccaggc ttttagaagt    600

ttatcggcat tgcaagccat gaccttggcc ctgaacaaaa tacaccacat accagactat    660

gcctttggaa acctctccag cttggtagtt ctacatctcc ataacaatag aatccactcc    720

ctgggaaaga aatgctttga tgggctccac agcctagaga ctttagattt aaattacaat    780

aaccttgatg aattccccac tgcaattagg acactctcca accttaaaga actaggattt    840

catagcaaca atatcaggtc gatacctgag aaagcatttg taggcaaccc ttctcttatt    900

acaatacatt tctatgacaa tcccatccaa tttgttggga gatctgcttt tcaacattta    960

cctgaactaa gaacactgac tctgaatggt gcctcacaaa taactgaatt tcctgattta   1020

actggaactg caaacctgga gagtctgact ttaactggag cacagatctc atctcttcct   1080

caaaccgtct gcaatcagtt acctaatctc caagtgctag atctgtctta caacctatta   1140

gaagatttac ccagtttttc agtctgccaa aagcttcaga aaattgacct aagacataat   1200

gaaatctacg aaattaaagt tgacactttc cagcagttgc ttagcctccg atcgctgaat   1260

ttggcttgga acaaaattgc tattattcac cccaatgcat tttccacttt gccatcccta   1320

ataaagctgg acctatcgtc caacctcctg tcgtcttttc ctataactgg gttacatggt   1380

ttaactcact taaaattaac aggaaatcat gccttacaga gcttgatatc atctgaaaac   1440

tttccagaac tcaaggttat agaaatgcct tatgcttacc agtgctgtgc atttggagtg   1500

tgtgagaatg cctataagat ttctaatcaa tggaataaag gtgacaacag cagtatggac   1560

gaccttcata agaaagatgc tggaatgttt caggctcaag atgaacgtga ccttgaagat   1620

ttcctgcttg actttgagga agacctgaaa gcccttcatt cagtgcagtg ttcaccttcc   1680

ccaggcccct tcaaaccctg tgaacacctg cttgatggct ggctgatcag aattggagtg   1740

tggaccatag cagttctggc acttacttgt aatgctttgg tgacttcaac agttttcaga   1800

tcccctctgt acatttcccc cattaaactg ttaattgggg tcatcgcagc agtgaacatg   1860

ctcacgggag tctccagtgc cgtgctggct ggtgtggatg cgttcacttt tggcagcttt   1920

gcacgacatg gtgcctggtg ggagaatggg gttggttgcc atgtcattgg ttttttgtcc   1980

attttttgctt cagaatcatc tgttttcctg cttactctgg cagccctgga gcgtgggttc   2040

tctgtgaaat attctgcaaa atttgaaacg aaagctccat tttctagcct gaaagtaatc   2100

attttgctct gtgccctgct ggccttgacc atggccgcag ttcccctgct gggtggcagc   2160

aagtatggcg cctcccctct ctgcctgcct ttgccttttg gggagcccag caccatgggc   2220

tacatggtcg ctctcatctt gctcaattcc ctttgcttcc tcatgatgac cattgcctac   2280

accaagctct actgcaattt ggacaaggga gacctggaga atatttggga ctgctctatg   2340

gtaaaacaca ttgccctgtt gctcttcacc aactgcatcc taaactgccc tgtggctttc   2400
```

                                    Page 66

```
ttgtccttct cctctttaat aaaccttaca tttatcagtc ctgaagtaat taagtttatc    2460

cttctggtgg tagtcccact tcctgcatgt ctcaatcccc ttctctacat cttgttcaat    2520

cctcacttta aggaggatct ggtgagcctg agaaagcaaa cctacgtctg gacaagatca    2580

aaacacccaa gcttgatgtc aattaactct gatgatgtcg aaaaacagtc ctgtgactca    2640

actcaagcct tggtaacctt taccagctcc agcatcactt atgacctgcc tcccagttcc    2700

gtgccatcac cagcttatcc agtgactgag agctgccatc tttcctctgt ggcatttgtc    2760

ccatgtctct aattaatatg tgaaggaaaa tgttttcaaa ggttgagaac ctgaaaatgt    2820

gagattgagt atatcagagc agtaattaat aagaagagct gaggtgaaac tcggtttaaa    2880
```

<210> 49
<211> 915
<212> DNA
<213> human

<400> 49
```
atggatcccc tgggcccggc caagccacag tggtcgtggc gctgctgtct gaccacgctg     60

ctgtttcagc tgctgatggc tgtgtgtttc ttctcctatc tgcgtgtgtc tcaagacgat    120

cccactgtgt accctaatgg gtcccgcttc ccagacagca cagggacccc cgcccactcc    180

atcccCctga tcctgctgtg gacgtggcct tttaacaaac ccatagctct gcccCgctgc    240

tcagagatgg tgcctggcac ggctgactgc aacatcactg ccgaccgcaa ggtgtatcca    300

caggcagacg cggtcatcgt gcaccaccga gaggtcatgt acaaccccag tgcccagctc    360

ccaCgctccC cgaggcggca ggggcagcga tggatctggt tcagcatgga gtccccaagc    420

cactgctggc agctgaaagc catggacgga tacttcaatc tcaccatgtc ctaccgcagc    480

gactccgaca tcttcacgcc ctacggctgg ctggagccgt ggtccggcca gcctgcccac    540

ccaccgctca acctctcggc caagaccgag ctggtggcct gggcagtgtc caactggggg    600

ccaaactccg ccagggtgcg ctactaccag agcctgcagg cccatctcaa ggtggacgtg    660

tacggacgct cccacaagcc cctgcCccag ggaaccatga tggagacgct gtcccggtac    720

aagttctatc tggccttcga gaactccttg caccccgact acatcaccga gaagctgtgg    780

aggaacgccc tggaggcctg ggccgtgccc gtggtgctgg cccCagcag aaggaacctc    840

attttcctgg ggcctcacct gagtggggggc ctcatctacc taaggactcg tttgcctgaa    900

gcttcacctg cctga                                                     915
```

<210> 50
<211> 1095
<212> DNA
<213> human

<400> 50
```
atggatcccc tgggcccggc caagccacag tggtcgtggc gctgctgtct gaccacgctg     60
```

```
ctgtttcagc tgctgatggc tgtgtgtttc ttctcctatc tgcgtgtgtc tcaagacgat      120

cccactgtgt accctaatgg gtcccgcttc ccagacagca cagggacccc cgcccactcc      180

atccccctga tcctgctgtg gacgtggcct tttaacaaac ccatagctct gccccgctgc      240

tcagagatgg tgcctggcac ggctgactgc aacatcactg ccgaccgcaa ggtgtatcca      300

caggcagacg cggtcatcgt gcaccaccga gaggtcatgt acaaccccag tgcccagctc      360

ccacgctccc cgaggcggca ggggcagcga tggatctggt tcagcatgga gtccccaagc      420

cactgctggc agctgaaagc catggacgga tacttcaatc tcaccatgtc ctaccgcagc      480

gactccgaca tcttcacgcc ctacggctgg ctggagccgt ggtccggcca gcctgcccac      540

ccaccgctca acctctcggc caagaccgag ctggtggcct gggcagtgtc caactggggg      600

ccaaactccg ccagggtgcg ctactaccag agcctgcagg cccatctcaa ggtggacgtg      660

tacggacgct cccacaagcc cctgccccag ggaaccatga tggagacgct gtcccggtac      720

aagttctatc tggccttcga gaactccttg caccccgact acatcaccga gaagctgtgg      780

aggaacgccc tggaggcctg ggccgtgccc gtggtgctgg ccccagcag aagcaactac       840

gagaggttcc tgccacccga cgccttcatc cacgtggacg acttccagag ccccaaggac      900

ctggcccggt acctgcagga gctggacaag gaccacgccc gctacctgag ctactttcgc      960

tggcgggaga cgctgcggcc tcgctccttc agctgggcac tcgctttctg caaggcctgc    1020

tggaaactgc aggaggaatc cagtggggggc ctcatctacc taaggactcg tttgcctgaa    1080

gcttcacctg cctga                                                      1095
```

```
<210>    51
<211>    1182
<212>    DNA
<213>    human
```

```
<400>    51
gtcctgagca gccaacacac cagcccagac agctgcaagt caccatggac gctgaaggcc       60

tggcgctgct gctgccgccc gtcaccctgg cagccctggt ggacagctgg ctccgagagg      120

actgcccagg gctcaactac gcagccttgg tcagcggggc aggcccctcg caggcggcgc      180

tgtgggccaa atcccctggg gtactggcag ggcagccttt cttcgatgcc atatttaccc      240

aactcaactg ccaagtctcc tggttcctcc ccgagggatc gaagctggtg ccggtggcca      300

gagtggccga ggtccggggc cctgcccact gcctgctgct ggggggaacgg gtggccctca      360

acacgctggc ccgctgcagt ggcattgcca gtgctgccgc cgctgcagtg gaggccgcca      420

ggggggccgg ctggactggg cacgtggcag gcacgaggaa gaccacgcca ggcttccggc      480

tggtggagaa gtatgggctc ctggtgggcg gggccgcctc gcaccgctac gacctgggag      540

ggctggtgat gttgaaggat aaccatgtgg tgcccccggg tggcgtggag aaggcggtgc      600
```

```
gggcggccag acaggcggct gacttcgctc tgaaggtgga agtggaatgc agcagcctgc    660

aggaggtcgt ccaggcagct gaggctggcg ccgaccttgt cctgctggac aacttcaagc    720

cagaggagct gcaccccacg gccaccgcgc tgaaggccca gttcccgagt gtggctgtgg    780

aagccagtgg gggcatcacc ctggacaacc tcccccagtt ctgcgggccg cacatagacg    840

tcatctccat ggggatgctg acccaggcgg tcccagccct tgatttctcc ctcaagctgt    900

ttgccaaaga ggtggctcca gtgcccaaaa tccactagtc ctaaaccgga agaggatgac    960

accggccatg ggttaacgtg gctcctcagg accctctggg tcacacatct ttagggtcag   1020

tgaacaatgg ggcacatttg cactagctt gagcccaact ctggctctgc cacctgctgc   1080

tcctgtgacc tgtcagggct gacttcacct ctgctcatct cagtttccta atctgtaaaa   1140

tgggtctaat aaaggatcaa ccaaaaaaaa aaaaaaaaaa aa                       1182
```

<210>   52
<211>   3600
<212>   DNA
<213>   human

<400>   52
```
gaatcaacag aatttgtctt tttgtgactg gtttatttca cttaacttca tcctcaaggt     60

tcaacttaaa ggtgtatcca tgttgtagca cgtgtcagca ttttctttcg ttctcaggct    120

aaatagtatt tcattgtgtg tgtacaccat gtttcatgca ttcattcatc ccttgaaaga    180

ttggtgggtt gtttcctcct ttttgctttt gtgaacagtg ctacgaacat ggttgtacaa    240

acatctcttg gagccccact agcagttcct ttgggtatat accccaaagt ggaattgctg    300

gatctggtag ctcccttttt aattttttga ggaatcgcca cagtttcc ataacagctg     360

caccatttta cattcccaag accttttttt tttttttttt tttaagaaga aaagatgtgt    420

ttctgcattt ctggaagtct atgctgcatt tccatttgtt gaaatttaag accagagtca    480

tcttttctgc tgtaattata atggtcactg gcttgtgcct tttcctcctc tctctgcccc    540

atctgcacgg ggtctttgaa caagtcccag caccttggtg gacaagcctg tgtccctggc    600

ccatcatgga agccgctgcc tttcagagtg ggagtctgta ccctgttgcc tcattccttg    660

ctgcgcccat gagtgagctt gtgcctgacc tctccttcca ggtggactta cacactgggc    720

tgtcggagtt ctcggtgacg cagcgccggc tggcccatgg ctggaatgag tttgttgctg    780

acaacagcga acctgtgtgg aagaaatacc tggatcagtt taagaacccc ctgatcctgc    840

tgctgctggg ctctgccctg gtgagtgtcc tcaccaagga gtatgaggac gccgtcagca    900

tcgccacggc agtgcttgtc gtggtcactg tcgccttcat ccaggagtac aggtcggaga    960

aatctctgga agagctgacc aagctggttc ctccagaatg taactgccta agagaaggaa   1020

aactccagca cctgcttgct cgagaactgg ttcctggtga tgtcgtatct ctctcgatcg   1080
```

```
gagaccggat ccctgcagac atccgactca ctgaggtcac ggacctcttg gtggatgaat   1140

ccagtttcac cggggaagcc gagccatgta gtaaaacaga cagccccttg acaggcggtg   1200

gggacctcac caccctcagc aacatcgtct tcatggggac cctggtgcag tatgggaggg   1260

gccagggggt cgtgattgga acaggggaaa gctctcagtt cggagaagtg tttaagatga   1320

tgcaggctga agagacacct aaaactcctt tgcagaaaag catggacagg ctaggaaagc   1380

aactgacact cttctccttt ggcataatcg gtctcatcat gctcattggc tggtcgcaag   1440

ggaaacaact cctgagtatg ttcacgatcg gggtcagcct ggctgtggcg gctattccag   1500

agggtctgcc catcgtcgtc atggtgacgc tggtcctggg agtgctgcgg atggccaaga   1560

agcgggtcat cgtgaagaag ttacccatcg tggagacttt aggttgctgc agcgttctct   1620

gttctgacaa gacggggact ctgactgcca atgaaatgac agtgacccag cttgtaacgt   1680

cagatgggct tcgtgccgag gtcagcggag ttgggtatga cggtcaaggg actgtgtgtc   1740

ttctaccatc caaggaagtc attaaggaat tttccaatgt ctcagtggga aagttagtgg   1800

aggcgggctg tgttgccaac aatgcggtca tcagaaagaa cgccgtgatg gggcagccca   1860

ccgagggtgc attgatggcc ctggcgatga agatggactt aagtgatatt aaaaattcat   1920

atataagaaa aaaagagatt ccattcagtt cagagcagaa gtggatggcg gtgaaatgca   1980

gtctgaagac tgaggatcag gaagacattt acttcatgaa aggggccttg gaagaggtga   2040

tccgctactg caccatgtac aacaacgggg gcatccccct gccgctgacg ccccagcaga   2100

ggtcattctg cctgcaggaa gagaagagga tggggtcgct cggtttgcgg gtgctggccc   2160

tggcttctgg gcccgagctg gggcggctga cgtttctagg tcttgtgggc atcattgacc   2220

ccccgagagt tggcgtgaag gaagcagtcc aggttctctc cgagtctggt gtgtctgtga   2280

agatgataac gggggatgcc ctggagacgg ccttggccat aggaagaaac atcggcctgt   2340

gcaacgggaa gctgcaagcc atgtccgggg aggaggtgga cagcgtggag aagggcgagc   2400

tggccgaccg cgtggggaag gtgtccgtgt tcttcaggac cagcccaaag cacaagctca   2460

aaatcatcaa ggctctgcag gagtcagggg cgatcgtggc catgactggg gatggggtga   2520

acgacgcagt ggccctgaag tctgcagaca ttgggatcgc catggggcag acagggacgg   2580

acgtcagcaa agaggccgcc aacatgatcc tggtggatga tgacttctca gccatcatga   2640

atgcagtgga ggaaggcaag ggtatttttt acaacatcaa aaactttgtc cgattccagc   2700

tgagcacgag catctccgcc ctgagtctca tcactctgtc caccgtgttc aacctgccca   2760

gcccctcaa cgccatgcag atcctatgga tcaacatcat catggatggg ccaccggcgc   2820

agagcttggg ggtagagccc gttgacaaag acgccttcag gcagccacca cggagtgtgc   2880

gggacaccat cctcagcaga gccctcatcc tgaagatcct catgtccgcg gccatcatca   2940
```

```
tcagcgggac cctctttatc ttctggaagg agatgcctga agacagagca agcactcccc   3000

gcaccacgac gatgacgttc acttgttttg tgtttttcga tctcttcaac gccttgacct   3060

gccgctctca gaccaagctg atatttgaga tcggctttct caggaaccac atgttcctct   3120

actccgtcct ggggtccatc ctggggcagc tggcggtcat ttacatcccc ccgctgcaga   3180

gggtcttcca gacggagaac ctgggagcgc ttgatttgct gtttttaact ggattggcct   3240

catccgtctt cattttgtca gagctcctca aactatgtga aaaatactgt tgcagcccca   3300

agagagtcca gatgcaccct gaagatgtgt agtggaccgc actccgcggc accttcccta   3360

atcatctcga tctggttgtg actgtggccc ctgccgtgtc tcctcgtcag gggagacttt   3420

taggaggccg cagccttcca tcaccggatc agttttttcct cttaggaaag ctgcaggaac   3480

ctcgtgggct ccagggaccc aggcccacat ccatccagcg ttcccgctgg ctgtgggaca   3540

gacagggagg ggcctgtaca gaaacaccac actgtttatt aaatcacaat gattttatt    3600
```

```
<210>   53
<211>   4192
<212>   DNA
<213>   human

<400>   53
tccaagctca aagaagcaga ggccgctgtt cgtttccttt aggtctttcc actaaagtcg     60

gagtatcttc ttccaagatt tcacgtcttg gtggccgttc caaggagcgc gaggtcggga    120

tggatcttga aggggaccgc aatggaggag caaagaagaa gaactttttt aaactgaaca    180

ataaaagtga aaagataag  aaggaaaaga aaccaactgt cagtgtattt tcaatgtttc    240

gctattcaaa ttggcttgac aagttgtata tggtggtggg aactttggct gccatcatcc    300

atggggctgg acttcctctc atgatgctgg tgtttggaga aatgacagat atctttgcaa    360

atgcaggaaa tttagaagat ctgatgtcaa acatcactaa tagaagtgat atcaatgata    420

cagggttctt catgaatctg gaggaagaca tgaccaggta tgcctattat tacagtggaa    480

ttggtgctgg ggtgctggtt gctgcttaca ttcaggtttc attttggtgc ctggcagctg    540

gaagacaaat acacaaaatt agaaaacagt tttttcatgc tataatgcga caggagatag    600

gctggtttga tgtgcacgat gttggggagc ttaacacccg acttacagat gatgtctcca    660

agattaatga aggaattggt gacaaaattg gaatgttctt tcagtcaatg gcaacatttt    720

tcactgggtt tatagtagga tttacacgtg gttggaagct aacccttgtg attttggcca    780

tcagtcctgt tcttggactg tcagctgctg tctgggcaaa gatactatct tcatttactg    840

ataaagaact cttagcgtat gcaaaagctg agcagtagc tgaagaggtc ttggcagcaa     900

ttagaactgt gattgcattt ggaggacaaa agaaagaact tgaaaggtac aacaaaaatt    960

tagaagaagc taaaagaatt gggataaaga aagctattac agccaatatt tctataggtg   1020
```

```
ctgctttcct gctgatctat gcatcttatg ctctggcctt ctggtatggg accaccttgg     1080

tcctctcagg ggaatattct attggacaag tactcactgt attttctgta ttaattgggg     1140

cttttagtgt tggacaggca tctccaagca ttgaagcatt tgcaaatgca agaggagcag     1200

cttatgaaat cttcaagata attgataata agccaagtat tgacagctat tcgaagagtg     1260

ggcacaaacc agataatatt aagggaaatt tggaattcag aaatgttcac ttcagttacc     1320

catctcgaaa agaagttaag atcttgaagg gtctgaacct gaaggtgcag agtgggcaga     1380

cggtggccct ggttggaaac agtggctgtg ggaagagcac aacagtccag ctgatgcaga     1440

ggctctatga ccccacagag gggatggtca gtgttgatgg acaggatatt aggaccataa     1500

atgtaaggtt tctacgggaa atcattggtg tggtgagtca ggaacctgta ttgtttgcca     1560

ccacgatagc tgaaaacatt cgctatggcc gtgaaaatgt caccatggat gagattgaga     1620

aagctgtcaa ggaagccaat gcctatgact ttatcatgaa actgcctcat aaatttgaca     1680

ccctggttgg agagagaggg gcccagttga gtggtgggca gaagcagagg atcgccattg     1740

cacgtgccct ggttcgcaac cccaagatcc tcctgctgga tgaggccacg tcagccttgg     1800

acacagaaag cgaagcagtg gttcaggtgg ctctggataa ggccagaaaa ggtcggacca     1860

ccattgtgat agctcatcgt ttgtctacag ttcgtaatgc tgacgtcatc gctggtttcg     1920

atgatggagt cattgtggag aaaggaaatc atgatgaact catgaaagag aaaggcattt     1980

acttcaaact tgtcacaatg cagacagcag gaaatgaagt tgaattagaa aatgcagctg     2040

atgaatccaa aagtgaaatt gatgccttgg aaatgtcttc aaatgattca agatccagtc     2100

taataagaaa aagatcaact cgtaggagtg tccgtggatc acaagcccaa gacagaaagc     2160

ttagtaccaa agaggctctg gatgaaagta tacctccagt ttccttttgg aggattatga     2220

agctaaattt aactgaatgg ccttattttg ttgttggtgt attttgtgcc attataaatg     2280

gaggcctgca accagcattt gcaataatat tttcaaagat tataggggtt tttacaagaa     2340

ttgatgatcc tgaaacaaaa cgacagaata gtaacttgtt ttcactattg tttctagccc     2400

ttggaattat ttctttatt acatttttcc ttcagggttt cacatttggc aaagctggag     2460

agatcctcac caagcggctc cgatacatgg ttttccgatc catgctcaga caggatgtga     2520

gttggtttga tgaccctaaa aacaccactg gagcattgac taccaggctc gccaatgatg     2580

ctgctcaagt taaaggggct ataggttcca ggcttgctgt aattacccag aatatagcaa     2640

atcttgggac aggaataatt atatccttca tctatggttg gcaactaaca ctgttactct     2700

tagcaattgt acccatcatt gcaatagcag gagttgttga aatgaaaatg ttgtctggac     2760

aagcactgaa agataagaaa gaactagaag gtgctgggaa gatcgctact gaagcaatag     2820

aaaacttccg aaccgttgtt tctttgactc aggagcagaa gtttgaacat atgtatgctc     2880

agagtttgca ggtaccatac agaaactctt tgaggaaagc acacatcttt ggaattacat     2940
```

```
tttccttcac ccaggcaatg atgtattttt cctatgctgg atgtttccgg tttggagcct   3000

acttggtggc acataaactc atgagctttg aggatgttct gttagtattt tcagctgttg   3060

tctttggtgc catggccgtg gggcaagtca gttcatttgc tcctgactat gccaaagcca   3120

aaatatcagc agcccacatc atcatgatca ttgaaaaaac ccctttgatt gacagctaca   3180

gcacggaagg cctaatgccg aacacattgg aaggaaatgt cacatttggt gaagttgtat   3240

tcaactatcc cacccgaccg gacatcccag tgcttcaggg actgagcctg gaggtgaaga   3300

agggccagac gctggctctg gtgggcagca gtggctgtgg gaagagcaca gtggtccagc   3360

tcctggagcg gttctacgac ccccttggcag ggaaagtgct gcttgatggc aaagaaataa   3420

agcgactgaa tgttcagtgg ctccgagcac acctgggcat cgtgtcccag gagcccatcc   3480

tgtttgactg cagcattgct gagaacattg cctatggaga caacagccgg gtggtgtcac   3540

aggaagagat tgtgagggca gcaaaggagg ccaacataca tgccttcatc gagtcactgc   3600

ctaataaaata tagcactaaa gtaggagaca aaggaactca gctctctggt ggccagaaac   3660

aacgcattgc catagctcgt gcccttgtta gacagcctca tattttgctt ttggatgaag   3720

ccacgtcagc tctggataca gaaagtgaaa aggttgtcca agaagccctg gacaaagcca   3780

gagaaggccg cacctgcatt gtgattgctc accgcctgtc caccatccag aatgcagact   3840

taatagtggt gtttcagaat ggcagagtca aggagcatgg cacgcatcag cagctgctgg   3900

cacagaaagg catctatttt tcaatggtca gtgtccaggc tggaacaaag cgccagtgaa   3960

ctctgactgt atgagatgtt aaatactttt taatatttgt ttagatatga catttattca   4020

aagttaaaag caaacactta cagaattatg aagaggtatc tgtttaacat ttcctcagtc   4080

aagttcagag tcttcagaga cttcgtaatt aaaggaacag agtgagagac atcatcaagt   4140

ggagagaaat catagtttaa actgcattat aaattttata acagaattaa ag          4192
```

<210> 54
<211> 771
<212> DNA
<213> human

<400> 54

```
gctgtctcta cacacgtggc cctcggggcc tacgccccgc tcacaaagca tgggacactg     60

gtggtggagg atgtggtggc atcctgcttc gcggccgtgg ctgaccacca cctggctcag    120

ttggccttct ggccccctgag actctttcac agcttggcat ggggcagctg gaccccggggg   180

gagggtgtgc attggtaccc ccagctgctc taccgcctgg ggcgtctcct gctagaagag    240

ggcagcttcc acccactggg catgtccggg gcagggagct gaaaggactc caccgctgcc    300

ctcctggaac tgctgtactg ggtccagaag cctctcagcc aggagggagc tggccctgga    360

agggacctga gctggggggac actggctcct gccatctcct ctgccatgaa gatacaccat    420
```
Page 73

```
tgagacttga ctgggcaaca ccagcgtccc ccacccgcgc gtggtgtagt catagagctg    480

caagctgagc tggcgagggg atggttgttg acccctctct cctagagacc ttgaggctgg    540

cacgggactc ccaactcagc ctgctctcac tacgagtttt catactctgc ctcccccatt    600

ggggagggcc cattccatcc atctttaggc ccctttgggt gggcttgcgc ctcagtttga    660

tgctgctaaa ttcccctggg agccagcatg gatctggtgg accgatgctg tcagaactgg    720

gaaggcacca gggtggggca gcatcccggg cattctgagg tatgacattc c             771
```

<210>   55
<211>   4446
<212>   DNA
<213>   human

<400>   55
```
ttcttaaccc tttccagctt tcccaccctc tttggcttta gccatggcct tctgatctgt     60

gtttctcagg ggacctgcag gccccagata tagccccatg ctgtcctcct accccagagc    120

acactgttca ggctacttcc actggtactg aaatccagta tttcacttac tcttttcctt    180

tccaatatcc tcatgacatt caatatttca cttactctag gtcctccctg cctaaggccc    240

aagtcaactt tctgtccagt gggatttgta atccaatgcc tcctagccct agcagaatcc    300

catgtggata atcagaaatg tgactggaaa aaggacagag ctctatggct gtgggtccca    360

gtccccactg ctggcagtaa gtccccagca gtgagctgtg taagcacctt acattctgcg    420

cttggttgaa aacagcaagg caagcatcca cttgagaaat gtcaacccct aggaaatccc    480

agcctcaagt ctttctcatc ccttgggaag tgcaaattgg atagagaaga aaccaattaa    540

aaacaaaaca aacaaatcat acttagatat tctggctttt ctcaccaggg ctggattaaa    600

gcatgtactt caaaataata acaacttaag tcaataaata aatgtaagga agtccaaatg    660

ttcacctgaa gacaactgtg gtcatttttt ggcaatccca ggttctcttt tctacctgtt    720

tgctcaatcg tggtctccct ctccctctct tgttggggcc catgcccctg ctttactgtt    780

gccagaggct tgtacttgtt tgccttttag gtaggagcag ttacttccac tcccctcacc    840

tgccataaag catctttata aacaaagcaa gtagaagaaa cacatcctgg tatccaccac    900

attcggcttt tgttgattct gttcacttgg gagcacctgc tgctagggaa taagaaggtt    960

gaggctgaag agtgaggact cttcagctcc cctctggcag gacccgggag aggaaagagc   1020

cctcagctgg tccatcctcc ccactcctgg tcagccttct gttctgagat caaagtggtg   1080

gggtcacatt ctcgagaact gtgctcagcc ccctcatctc acacctttc cctctccctg    1140

tgtgcctgcc cccctcttac ataaccatgc tggtgattgg caccgtcata aatcaatact   1200

ttgctcactt tcacatcaag taacactatc cagggaggtg gtttcaacaa aggaggaagt   1260

ataaggagat ctaggttcaa attaatgttg ccctagtgg taaaggacag agaccctcag     1320
```

```
actgatgaaa tgcactcaga attacttaga caaagcggat atttgccact ctcttcccct   1380

tttcctgtgt ttttgtagtg aagagacctg aaagaaaaaa gtagggagaa cataatgaga   1440

acaaatacgg taatctcttc atttgctagt tcaagtgctg gacttgggac ttaggagggg   1500

caatggagcc gcttagtgcc tacatctgac ttggactgaa atataggtga gagacaagat   1560

tgtctcatat ccggggaaat cataacctat gactaggacg ggaagaggaa gcactgcctt   1620

tacttcagtg ggaatctcgg cctcagcctg caagccaagt gttcacagtg agaaaagcaa   1680

gagaataagc taatactcct gtcctgaaca aggcagcggc tccttggtaa agctactcct   1740

tgatcgatcc tttgcaccgg attgttcaaa gtggacccca ggggagaagt cggagcaaag   1800

aacttaccac caagcagtcc aagaggccca gaagcaaacc tggaggtgag acccaaagaa   1860

agctggaacc atgctgactt tgtacactgt gaggacacag agtctgttcc tggaaagccc   1920

agtgtcaacg cagatgagga agtcggaggt ccccaaatct gccgtgtatg tggggacaag   1980

gccactggct atcacttcaa tgtcatgaca tgtgaaggat gcaagggctt tttcaggagg   2040

gccatgaaac gcaacgcccg gctgaggtgc cccttccgga agggcgcctg cgagatcacc   2100

cggaagaccc ggcgacagtg ccaggcctgc cgcctgcgca agtgcctgga gagcggcatg   2160

aagaaggaga tgatcatgtc cgacgaggcc gtggaggaga ggcgggcctt gatcaagcgg   2220

aagaaaagtg aacggacagg gactcagcca ctgggagtgc aggggctgac agaggagcag   2280

cggatgatga tcagggagct gatggacgct cagatgaaaa cctttgacac taccttctcc   2340

catttcaaga atttccggct gccaggggtg cttagcagtg ctgcgagtt gccagagtct   2400

ctgcaggccc catcgaggga agaagctgcc aagtggagcc aggtccggaa agatctgtgc   2460

tctttgaagg tctctctgca gctgcggggg gaggatggca gtgtctggaa ctacaaaccc   2520

ccagccgaca gtggcgggaa agagatcttc tccctgctgc cccacatggc tgacatgtca   2580

acctacatgt tcaaaggcat catcagcttt gccaaagtca tctcctactt cagggacttg   2640

cccatcgagg accagatctc cctgctgaag ggggccgctt cgagctgtg tcaactgaga   2700

ttcaacacag tgttcaacgc ggagactgga acctgggagt gtggccggct gtcctactgc   2760

ttggaagaca ctgcaggtgg cttccagcaa cttctactgg agcccatgct gaaattccac   2820

tacatgctga agaagctgca gctgcatgag gaggagtatg tgctgatgca ggccatctcc   2880

ctcttctccc cagaccgccc aggtgtgctg cagcaccgcg tggtggacca gctgcaggag   2940

caattcgcca ttactctgaa gtcctacatt gaatgcaatc ggccccagcc tgctcatagg   3000

ttcttgttcc tgaagatcat ggctatgctc accgagctcc gcagcatcaa tgctcagcac   3060

acccagcggc tgctgcgcat ccaggacata cacccctttg ctacgcccct catgcaggag   3120

ttgttcggca tcacaggtag ctgagcggct gcccttgggt gacacctccg agaggcagcc   3180
```

```
agacccagag ccctctgagc cgccactccc gggccaagac agatggacac tgccaagagc   3240

cgacaatgcc ctgctggcct gtctccctag ggaattcctg ctatgacagc tggctagcat   3300

tcctcaggaa ggacatgggt gcccccacc cccagttcag tctgtaggga gtgaagccac   3360

agactcttac gtggagagtg cactgacctg taggtcagga ccatcagaga ggcaaggttg   3420

ccctttcctt ttaaaaggcc ctgtggtctg gggagaaatc cctcagatcc cactaaagtg   3480

tcaaggtgtg gaagggacca agcgaccaag gataggccat ctggggtcta tgcccacata   3540

cccacgtttg ttcgcttcct gagtctttc attgctacct ctaatagtcc tgtctcccac   3600

ttcccactcg ttcccctcct cttccgagct gctttgtggg ctccaggcct gtactcatcg   3660

gcaggtgcat gagtatctgt gggagtcctc tagagagatg agaagccagg aggcctgcac   3720

caaatgtcag aagcttggca tgacctcatt ccggccacat cattctgtgt ctctgcatcc   3780

atttgaacac attattaagc accgataata ggtagcctgc tgtggggtat acagcattga   3840

ctcagatata gatcctgagc tcacagagtt tatagttaaa aaaacaaaca gaaacacaaa   3900

caatttggat caaaaggaga aatgataagt gacaaaagca gcacaaggaa tttccctgtg   3960

tggatgctga gctgtgatgg cgggcactgg gtacccaagt gaaggttccc gaggacatga   4020

gtctgtagga gcaagggcac aaactgcagc tgtgagtgcg tgtgtgtgat ttggtgtagg   4080

taggtctgtt tgccacttga tggggcctgg gtttgttcct ggggctggaa tgctgggtat   4140

gctctgtgac aaggctacgc tgacaatcag ttaaacacac cggagaagaa ccatttacat   4200

gcaccttata tttctgtgta cacatctatt ctcaaagcta aagggtatga aagtgcctgc   4260

cttgtttata gccacttgtg agtaaaaatt tttttgcatt ttcacaaatt atactttata   4320

taaggcattc cacacctaag aactagtttt gggaaatgta gccctgggtt taatgtcaaa   4380

tcaaggcaaa aggaattaaa taatgtactt ttggctaaaa aaaaaaaaaa aaaaaaaaaa   4440

aaaaaa                                                              4446
```

<210> 56
<211> 1276
<212> DNA
<213> human

<400> 56
```
tgagatcact tcccttgcac agtttggaag ggagagcact ttattacaga ccttggaagc  . 60

aagaggattg cattcagcct agttcctggt tgctggccaa agggatcatg gacattgaag   120

catattttga aagaattggc tataagaact ctaggaacaa attggacttg gaaacattaa   180

ctgacattct tgagcaccag atccgggctg ttccctttga gaaccttaac atgcattgtg   240

ggcaagccat ggagttgggc ttagaggcta tttttgatca cattgtaaga agaaaccggg   300

gtgggtggtg tctccaggtc aatcaacttc tgtactgggc tctgaccaca atcggttttc   360
```

```
agaccacaat gttaggaggg tatttttaca tccctccagt taacaaatac agcactggca    420

tggttcacct tctcctgcag gtgaccattg acggcaggaa ttacattgtc gatgctgggt    480

ctggaagctc ctcccagatg tggcagcctc tagaattaat ttctgggaag gatcagcctc    540

aggtgccttg cattttctgc ttgacagaag agagaggaat ctggtacctg gaccaaatca    600

ggagagagca gtatattaca aacaaagaat ttcttaattc tcatctcctg ccaaagaaga    660

aacaccaaaa aatatactta tttacgcttg aacctcgaac aattgaagat tttgagtcta    720

tgaatacata cctgcagacg tctccaacat cttcatttat aaccacatca ttttgttcct    780

tgcagacccc agaaggggtt tactgtttgg tgggcttcat cctcacctat agaaaattca    840

attataaaga caatacagat ctggtcgagt ttaaaactct cactgaggaa gaggttgaag    900

aagtgctgaa aaatatattt aagatttcct tggggagaaa tctcgtgccc aaacctggtg    960

atggatccct tactatttag aataaggaac aaaataaacc cttgtgtatg tatcacccaa   1020

ctcactaatt atcaacttat gtgctatcag atatcctctc taccctcacg ttattttgaa   1080

gaaaatccta aacatcaaat actttcatcc ataaaaatgt cagcatttat taaaaaacaa   1140

taacttttta aagaaacata aggacacatt ttcaaattaa taaaaataaa ggcattttaa   1200

ggatggcctg tgattatctt gggaagcaga gtgattcatg ctagaaaaca tttaatattg   1260

atttattgtt gaattc                                                   1276
```

```
<210>  57
<211>  4999
<212>  DNA
<213>  human

<400>  57
gaggaggatt cgcagttcaa catcaaggtc cctgtgcgtt ttattgcgac ctgccggtgg     60

gaactttgtc tccgagtcgg agcagcatgg agcggcggag cgagagcccg tgtctgcggg    120

acagccccga ccggcggagc ggcagcccgg acgtcaaggg gcctcccca gtgaaggtgg    180

cccggctgga gcagaacggc agccccatgg agcccgcgg gaggcccaac ggcgccgtgg    240

ccaaggccgt gggaggtttg atgattcctg tcttttgtgt cgtggagcag ttggacggct    300

ctcttgaata tgacaacaga gaagaacacg ccgagtttgt cctggtgcgg aaagatgtgc    360

tttttagcca gctggtggag actgcgctcc tggccctggg gtattctcac agctctgcgg    420

cccaggccca aggaataatc aagctgggaa ggtggaaccc tctcccctc agttatgtga    480

cagatgcacc cgacgcgaca gtggccgaca tgctacaaga tgtctatcat gttgtgacgt    540

tgaaaatcca attacaaagt tgttcaaagt tggaagactt gcctgcggag cagtggaacc    600

atgccacagt ccgcaatgcc ttaaaggaac tgctcaaaga gatgaaccag agcacattag    660

ccaaagaatg ccctctctcc cagagtatga tttcatccat tgtaaatagc acatattatg    720
```

```
ccaatgtgtc agcaaccaag tgccaggagt ttgggagatg gtataaaaag tacaagaaga    780

ttaaagtgga aagagtggaa cgagaaaacc tttcagacta ttgtgttctg ggccagcgtc    840

caatgcattt accaaatatg aaccagctgg catccctggg gaaaaccaac gaacagtctc    900

ctcacagcca aattcaccac agtactccaa tccgaaacca agtgcccgca ttacagccca    960

tcatgagccc tggtcttctt tctccccagc ttagtccaca acttgtaagg caacaaatag    1020

ccatggccca tctgataaac caacagattg ccgttagccg gctcctggct caccagcatc    1080

ctcaagccat caaccagcag ttcctgaacc atccacccat ccccagagca gttaagccag    1140

agccaaccaa ctcttccgtg gaagtctctc cagatatcta ccagcaagtc agagatgagc    1200

tgaagagggc cagtgtgtcc caagctgtct ttgcaagagt ggcattcaac cgcacacagg    1260

gattgttgtc tgagattctg cgtaaggaag aagaccctcg gacagcctct cagtctcttc    1320

tagtaaacct gagggccatg cagaatttcc tcaatctgcc agaagtggag cgagatcgca    1380

tctaccagga tgagagggag cggagcatga atcccaatgt gagcatggtc tcctcggcct    1440

ccagcagtcc cagctcctcc cgaacccctc aggccaaaac ctcgacaccg acaacagacc    1500

tccctattaa ggtggacggc gccaacatca acatcacagc tgccatttat gacgagatcc    1560

aacaggagat gaaaagggcc aaggtgtctc aagccctgtt tgccaaagtg gctgcaaata    1620

aaagtcaggg ctggctgtgt gaactgctcc gctggaagga gaacccaagc ccagaaaacc    1680

gcaccctctg ggaaaacctc tgtaccatcc gtcgcttcct gaaccttccc cagcatgaga    1740

gggatgtcat ctatgaggag gagtcaaggc atcaccacag cgaacgcatg caacacgtgg    1800

tccagcttcc ccctgagccg gtgcaggtac ttcatagaca gcagtctcag ccagccaagg    1860

agagttcccc tcccagagaa gaagcgcctc ccccacctcc tccgactgaa gacagttgtg    1920

ccaaaaagcc ccggtctcgc acaaagatct ccttagaagc cctggggatc ctccaaagct    1980

ttattcatga tgtaggcctg tacccagacc aggaagccat ccacactctt tcggctcagc    2040

tggatctccc caaacacacc atcatcaagt tcttccagaa ccagcggtac cacgtgaagc    2100

accacgggaa gctgaaagag cacctgggct ccgcggtgga cgtggctgaa tataaggacg    2160

aggagctgct gaccgagtca gaggagaacg acagcgagga aggctccgag gagatgtaca    2220

aagtggaggc tgaggaggaa aatgctgaca aaagcaaggc agcacctgcc gaaattgacc    2280

agagataatg tgaacttcta ctaggcaaag caatacatcg gtccaaggat tttctgcttt    2340

catttcttta aaagtttttt gttagtttgt tttttgtttt tgtttttggg ttttttttggc    2400

tttattttttg tcttttttatg tctgttttgt ttttcttacc cttttggaca tttctttgtt    2460

gcacaggata cacctataga ctgaataagt tcagtatttc cgaatcagac atcgccttgg    2520

caaagacact aaagcgttac actttatccc gtctctatga ctggatcata gtcattataa    2580

tcacaggaga ctctgccttc attatccttg cacttaacgg aagttacatc aggcaagttc    2640
```

```
caggatgaaa agaactatga aataaatgaa ggaagctaca agtgtgtgtg tatatgtata    2700

tgtatatatc tctatattta catatatata ttaaaattgc atgggacaga gactttgcaa    2760

tccgaaagaa tagactgtga aatgagttct taaagaaaag acttgtttat gtattaaaaa    2820

aaccacttca cagtgagtcg ctttggcttt ttgataaact gcggcctgct ctcagggtgg    2880

ggtgactatt tttgaattcc tatttatttt ttgtgtttgt ccctgatttt ttttttttaat    2940

tctatggctt cctatctggc agcttaatgg gtaatttttg aggtatgtat ttaacaaaat    3000

aaacgacact gccgaaaaaa aaaaaagtga agtgaaaaca atcagggcac attaaaatga    3060

tacaagtcaa ataaatctta aagacacaat gcacacttaa aatgactcaa taaaatgact    3120

tgctacgttc cgttattcaa tttgtcatta ctgtagtgaa cagatgcatt tctgtggaat    3180

tccaaataag taaaactgaa attcagtgca gagaaaactt tgtccactag tgcaagtctt    3240

gatcaaatga cattttgaca ttggacatat ggaattcata gtatgagcca cattttgttg    3300

tgaaatttat ttacctgctt gtggcttcaa atctgaaaat taataagcct gctcgtttaa    3360

aagttgtttg ttgttgctgt ttttttgtct ttttgttttt tactagaaaa tagttcagtg    3420

taatattaag ttagaaaaga agttgctgcc cagttaaagg ggctccctct caaataaatc    3480

tccatccttc cctctcccaa aagacatttc tgatttctgc ttcactttgg gcttcctctt    3540

cttcgtacac attccatcta cctaatcaaa cattttcagt ccctgatctc tcctgtccct    3600

tttcctggga tgacagccct aacaagaact gtttttgaat cgttgtgcag ctccaggcaa    3660

tagagtatgt gaagcgattt cagtagaatc acttactcat cctaaaagaa aacattatcc    3720

cagttaccta catcgcaatt accttatgta aagcagaact aatgctgact ggatgtttaa    3780

tgggatgagc attaaagctg caatctacta tagtactcca gatctctttc ggcttcctat    3840

gagaaacacc agaagcatta ctttccactt ctacttacag taattgcaag aggagacctc    3900

acattcagga ctggcctagt gaacgtaatc catgctttaa actggccatt aaacagtccc    3960

acatggttgg attttttttt tttttttgag ttgtgctttc acaaaacctt gtcaaagacc    4020

tcatgcaata tcactttgaa agttattttc tgtttactac acaaacattg taatataact    4080

gttaatacta tttatatatt tgaaaggtat aaaaggtagg agttaaaaaa aaaacctcta    4140

tgtgtagata ttaactcaga acttacaata tacagggaga agacatgttg caatacaagc    4200

taattctagc tgctcagtaa cctctggagt ttttaaaggg acattttcct gtacttttc     4260

aaataatgat gtttaaaaat tatcttgaca taagcgtcat atacctttgc aaaaggatgg    4320

ttgtttgcag ttagccctgg ccccatcctt cctatttctg tagtatgctg cagctttaat    4380

cagaaagtcc atggttgctg cttcctgatc tccgagttac tctttccaaa ttgtcttctt    4440

acactgttgc tgaaggtcac tctgtacacg taatggaaac tgattttgcc aagctcttac    4500
```

```
aaggtggttc atctatcgat ggcatccgca tttggtatct tttacacttc aaccaaaaat    4560

ttattaggta tttttcaatg ctaagtcttg cctttatttt tttaatttca ctgccaagtt    4620

tgcagtggtt ctaagtgaat ctgtgggcat tttagcctgt ggtcttgcca gatctttgcg    4680

aattacaatg catatatgtc tatttattca atatctgtca tataatatct atttggaaga    4740

agaaactttc tcttgtagtg cctcttgaca aagcacaatt tcccgccttt tttttttttt    4800

ttgtgaaatg aaaaaaacaa attgtgtttt attgcggtat caacaatgtg aataaggatt    4860

aacatattgt aaatgttctt ttttccatgt aaatcaacta tctttgttat cactaagtga    4920

taattaattt ttaacttatg tgcattgtta ggctgttaga attttttggt tgttaaaata    4980

aacgcattca ataaatatg                                                  4999
```

```
<210>   58
<211>   1117
<212>   DNA
<213>   human

<400>   58
atctcccact cctgcagctc ttctcacagg accagccact agcgcagcct cgagcgatgg     60

cctatgtccc cgcaccgggc taccagccca cctacaaccc gacgctgcct tactaccagc    120

ccatcccggg cgggctcaac gtgggaatgt ctgtttacat ccaaggagtg ccagcgagc     180

acatgaagcg gttcttcgtg aactttgtgg ttgggcagga tccgggctca gacgtcgcct    240

tccacttcaa tccgcggttt gacggctggg acaaggtggt cttcaacacg ttgcagggcg    300

ggaagtgggg cagcgaggag aggaagagga gcatgccctt caaaaagggt gccgcctttg    360

agctggtctt catagtcctg gctgagcact acaaggtggt ggtaaatgga aatcccttct    420

atgagtacgg gcaccggctt cccctacaga tggtcaccca cctgcaagtg gatggggatc    480

tgcaacttca atcaatcaac ttcatcggag ccagcccct ccggccccag ggacccccga    540

tgatgccacc ttaccctggt cccggacatt gccatcaaca gctgaacagc ctgcccacca    600

tggaaggacc cccaaccttc aacccgcctg tgccatattt cgggaggctg caaggagggc    660

tcacagctcg aagaaccatc atcatcaagg gctatgtgcc tcccacaggc aagagctttg    720

ctatcaactt caaggtgggc tcctcagggg acatagctct gcacattaat ccccgcatgg    780

gcaacggtac cgtggtccgg aacagccttc tgaatggctc gtggggatcc gaggagaaga    840

agatcaccca caacccattt ggtcccggac agttctttga tctgtccatt cgctgtggct    900

tggatcgctt caaggtttac gccaatggcc agcacctctt tgactttgcc catcgcctct    960

cggccttcca gagggtggac acattggaaa tccagggtga tgtcaccttg tcctatgtcc    1020

agatctaatc tattcctggg gccataactc atgggaaaac agaattatcc cctaggactc    1080

ctttctaagc ccctaataaa atgtctgagg gtgtctc                             1117
```

```
<210>   59
<211>   2246
<212>   DNA
<213>   human

<400>   59
gatccagcta tggagaaagc cgcagatctg caggacacag cctcgttaac tctgaagttt      60

aagtttaacc caaagctggg cattgataat cctgtcctct ccctggccga agaccacgac     120

ccctatgatc cctggagcct ggagcggcct cgcttctgtt tactgagcaa agaggagggc     180

aagagttttg gcttccacct gcagcaggag ctgggcaggg ctgggcatgt ggtgtgcagg     240

gtggacccag gcacctctgc ccagcgccag ggtcttcagg aaggagacag gatcctggcg     300

gtgaacaatg atgttgtgga acacgaagac tatgcggtgg tggtacgccg catccgggcc     360

agcagccctc gggtgttgct gacagtattg gcacggcatg cacatgacgt ggcccgagct     420

cagctgggag aagatgccca cctctgtccc accctaggcc caggggtccg gccccggctg     480

tgccacatag tgaaagatga gggtggtttt ggcttcagtg tcacccatgg caatcagggt     540

cctttctggt tggtgctaag tactggagga gcagctgagc gggcaggggt gccccccggg     600

gcccggctgc tggaagtgaa tgggctttgg cagagtggac agcaggtgac cttgctggtg     660

gcagggccag aggtggaaga acagtgtcgc cagctgggat gcccctggc tgcacccctg     720

gcagagggct gggcactgcc caccaagccc cgctgcctgc acctggagaa agggccccag     780

ggttttgggt tcctgctccg ggaggaaaag ggccttgacg gtcgccctgg acagttcctg     840

tgggaggtgg acccgggact gccagccaag aaggctggga tgcaggctgg ggaccggctg     900

gtggctgtgg ctggggagag cgtggagggg ctgggccatg aggagacagt gtccaggatc     960

cagggggcagg gctcctgtgt ctccctcact gtcgtcgacc ctgaggcgga ccgcttcttc    1020

agcatggttc gcctgtcccc actcctcttc ttggagaaca cagaggctcc cgcctcgccc    1080

cagggcagca gctcagcctc actggttgag acagaggacc cttcacttga agacacaagc    1140

gtgccttctg tccctcttgg ctcccgacag tgcttcctgt accctgggcc tggtggcagc    1200

tatggcttcc gactcagttg tgtggccagt gggcctcgtc tcttcatctc ccaggtgact    1260

ccaggaggct cagctgcccg ggctgggctg caagtgggag acgtgattct ggaagtgaac    1320

gggtatcctg ttgggggaca gaatgacctg gagaggcttc agcagctgcc tgaggctgag    1380

ccacccctct gcctgaagct ggcagccagg tctctgcggg gcttggaagc ctggattccc    1440

cctggggctg cagaggactg ggctctggcc tcggatctac tgtagagcac ccctgcttgg    1500

tacagacata ctcaggggct accgtgtctt cactctccag cctgaggtgg tgaaggcagg    1560

atgctctctc taagccagac cagagggact cagacaccac cgatcacagg ctggcccagg    1620

tgctccctcc cttcctgcag gcccacctgc cagcagaggg tgtggttgga ggcctcagac    1680
```

```
aggtccctga aggagtctga ggctccagag gatgtcatat gggagtttta gagagctgtg   1740

tcccaaggat gaaggtgtgg ctgtgggtct ggctaggatt gaagccatct ggaccttttc   1800

tagatatgac tccaggaccc ttgagtgtaa tgcaaaaatt tggagaccag ctatgcctgc   1860

cctctgtggg tgccttagca ttgcgggagg gtggtgcttg gtcaccgttg catttgttat   1920

agaaatggcc attcgccata aatctgactg cctgtgtttg tgttggtggg ggtaaggggc   1980

agtggtgtga agggaccaaa agggcctcag gctcaagggg tgggatgcgg ctcctgcagg   2040

agagaggttg agacctggtc aaatttattt cctatcaatc actgaatctc agggataatg   2100

ggtcaaccca gaactgagat gtctgtatga cagccactcc taaaaataaa caacaacaaa   2160

aacaaaaaaa gaagaaaact aaataaaaat aaaaataaaa ataaaaaaaa aaaaaaaaaa   2220

aaaaaaaaaa aaaaaaaaaa aaaaaa                                        2246
```

<210> 60
<211> 2418
<212> DNA
<213> human

<400> 60
```
agtccagctt gggtccctga gagctgtgag aaggagatgc ggctgctgct ggccctgttg     60

ggggtcctgc tgagtgtgcc tgggcctcca gtcttgtccc tggaggcctc tgaggaagtg    120

gagcttgagc cctgcctggc tcccagcctg gagcagcaag agcaggagct gacagtagcc    180

cttgggcagc ctgtgcggct gtgctgtggg cgggctgagc gtggtggcca ctggtacaag    240

gagggcagtc gcctggcacc tgctggccgt gtacggggct ggaggggccg cctagagatt    300

gccagcttcc tacctgagga tgctggccgc tacctctgcc tggcacgagg ctccatgatc    360

gtcctgcaga atctcacctt gattacaggt gactcctcga cctccagcaa cgatgatgag    420

gaccccaagt cccataggga cctctcgaat aggcacagtt accccagca agcaccctac    480

tggacacacc cccagcgcat ggagaagaaa ctgcatgcag tacctgcggg gaacaccgtc    540

aagttccgct gtccagctgc aggcaacccc acgcccacca tccgctggct taaggatgga    600

caggcctttc atggggggaa ccgcattgga ggcattcggc tgcgccatca gcactggagt    660

ctcgtgatgg agagcgtggt gcccctcggac cgcggcacat acacctgcct ggtagagaac    720

gctgtgggca gcatccgtta taactacctg ctagatgtgc tggagcggtc cccgcaccgg    780

cccatcctgc aggccgggct cccggccaac accacagccg tggtgggcag cgacgtggag    840

ctgctgtgca aggtgtacag cgatgcccag ccccacatcc agtggctgaa gcacatcgtc    900

atcaacggca gcagcttcgg agccgacggt ttcccctatg tgcaagtcct aaagactgca    960

gacatcaata gctcagaggt ggaggtcctg tacctgcgga acgtgtcagc cgaggacgca   1020

ggcgagtaca cctgcctcgc aggcaattcc atcggcctct cctaccagtc tgcctggctc   1080
```

Page 82

```
acggtgctgc caggtactgg gcgcatcccc cacctcacat gtgacagcct gactccagca    1140

ggcagaacca agtctcccac tttgcagttc tccctggagt caggctcctc cggcaagtca    1200

agctcatccc tggtacgagg cgtgcgtctc tcctccagcg gccccgcctt gctcgccggc    1260

ctcgtgagtc tagatctacc tctcgaccca ctatgggagt tcccccggga caggctggtg    1320

cttgggaagc ccctaggcga gggctgcttt ggccaggtag tacgtgcaga ggcctttggc    1380

atggaccctg cccggcctga ccaagccagc actgtggccg tcaagatgct caaagacaac    1440

gcctctgaca aggacctggc cgacctggtc tcggagatgg aggtgatgaa gctgatcggc    1500

cgacacaaga acatcatcaa cctgcttggt gtctgcaccc aggaagggcc cctgtacgtg    1560

atcgtggagt gcgccgccaa gggaaacctg cgggagttcc tgcgggcccg cgcccccca     1620

ggccccgacc tcagccccga cggtcctcgg agcagtgagg ggccgctctc cttcccagtc    1680

ctggtctcct gcgcctacca ggtggcccga ggcatgcagt atctggagtc ccggaagtgt    1740

atccaccggg acctggctgc ccgcaatgtg ctggtgactg aggacaatgt gatgaagatt    1800

gctgactttg gctggcccg cggcgtccac cacattgact actataagaa aaccagcaac      1860

ggccgcctgc ctgtgaagtg gatggcgccc gaggccttgt ttgaccgggt gtacacacac    1920

cagagtgacg tgtggtcttt tgggatcctg ctatgggaga tcttcaccct cgggggctcc    1980

ccgtatcctg gcatcccggt ggaggagctg ttctcgctgc tgcgggaggg acatcggatg    2040

gaccgacccc cacactgccc cccagagctg tacgggctga tgcgtgagtg ctggcacgca    2100

gcgccctccc agaggcctac cttcaagcag ctggtggagg cgctggacaa ggtcctgctg    2160

gccgtctctg aggagtacct cgacctccgc ctgaccttcg accctattc cccctctggt      2220

ggggacgcca gcagcacctg ctcctccagc gattctgtct tcagccacga ccccctgcca    2280

ttgggatcca gctccttccc cttcgggtct ggggtgcaga catgagcaag gctcaaggct    2340

gtgcaggcac ataggctggt ggccttgggc cttggggctc agccacagcc tgacacagtg    2400

ctcgaccttg atagcatg                                                  2418
```

```
<210>  61
<211>  1944
<212>  DNA
<213>  human

<400>  61
ccctctcgcg ccccaggccg gtgtacccccc gcactccgcg ccccggccta gaagctctct     60

ctccccgctc cccggcccgg cccccgcccc gccccgcccc agcccgctgg ccgccatgg      120

agcgctggcc ttggccgtcg ggcggcgcct ggctgctcgt ggctgcccgc gcgctgctgc     180

agctgctgcg ctcagacctg cgtctgggcc gcccgctgct ggcggcgctg gcgctgctgg     240

ccgcgctcga ctggctgtgc cagcgcctgc tgcccccgcc ggccgcactc gccgtgctgg     300
```

Page 83

```
ccgccgccgg ctggatcgcg ttgtcccgcc tggcgcgccc gcagcgcctg ccggtggcca      360

ctcgcgcggt gctcatcacc ggctgtgact ctggttttgg caaggagacg gccaagaaac      420

tggactccat gggcttcacg gtgctggcca ccgtattgga gttgaacagc cccggtgcca      480

tcgagctgcg tacctgctgc tcccctcgcc taaggctgct gcagatggac ctgaccaaac      540

caggagacat tagccgcgtg ctagagttca ccaaggccca caccaccagc accggcctgt      600

ggggcctcgt caacaacgca ggccacaatg aagtagttgc tgatgcggag ctgtctccag      660

tggccacttt ccgtagctgc atggaggtga atttctttgg cgcgctcgag ctgaccaagg      720

gcctcctgcc cctgctgcgc agctcaaggg gccgcatcgt gactgtgggg agcccagcgg      780

gggacatgcc atatccgtgc ttggggggcct atggaacctc caaagcggcc gtggcgctac      840

tcatggacac attcagctgt gaactccttc cctgggggggt caaggtcagc atcatccagc      900

ctggctgctt caagacagag tcagtgagaa acgtgggtca gtgggaaaag cgcaagcaat      960

tgctgctggc caacctgcct caagagctgc tgcaggccta cggcaaggac tacatcgagc     1020

acttgcatgg gcagttcctg cactcgctac gcctggccat gtccgacctc accccagttg     1080

tagatgccat cacagatgcg ctgctggcag ctcggccccg ccgccgctat taccccggcc     1140

agggcctggg gctcatgtac ttcatccact actacctgcc tgaaggcctg cggcgccgct     1200

tcctgcaggc cttcttcatc agtcactgtc tgcctcgagc actgcagcct ggccagcctg     1260

gcactacccc accacaggac gcagcccagg gcccaaacct gagccccggc ccttccccag     1320

cagtggctcg gtgagccatg tgcacctatg gcccagccac tgcagcacag gaggctccgt     1380

gagcccttgg ttcctccccg aaaacccccca gcattacgat cccccaagtg tcctggaccc     1440

tggcctaaag aatcccaccc ccacttcatg cccactgccg atgcccaatc caggcccggt     1500

gaggccaagg tttcccagtg agcctctgcg cctctccact gtttcatgag cccaaacacc     1560

ctcctggcac aacgctctac cctgcagctt ggagaactcc gctggatggg gagtctcatg     1620

caagacttca ctgcagcctt tcacaggact ctgcagatag tgcctctgca aactaaggag     1680

tgactaggtg ggttggggac cccctcagga ttgtttctcg gcaccagtgc ctcagtgctg     1740

caattgaggg ctaaatccca agtgtctctt gactggctca agaattaggg ccccaactac     1800

acacccccaa gccacaggga agcatgtact gtacttccca attgccacat tttaaataaa     1860

gacaaatttt tatttcttct aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa     1920

aaaaaaaaaa aaaaaaaaaa aaaa                                           1944
```

<210> 62
<211> 661
<212> DNA
<213> human

<400> 62

```
ttttttttt ttaaaatca atacaaatct tttattaaag atctactcat accatggctg      60

aaatcatcta ttattgttgc tagttagcct ctcttctata gttgggtaat gttgtcttgc     120

cactgtgttt gccatctctc ccaagtgaaa agaacacttt ttaaaaaaaa ttaattgctc     180

caagttttca ggcccagggg aggctctccc attctcctcc ttcaataagt cccgtccagg     240

aaagggtgat cttgtggata aattcatcat acttcacttt gccattgggt tcgatatctg     300

cttccctgaa gagatcatcc acttccttgt gggtgagctt ctcccccaga ctcgtgagtt     360

ttgaccgcag gtcggacgcc atgacgtaac cttcttctc cttgtccacc atcaacatgg      420

ctagaagaat ttctttcttt gggtcttctt gttttatttg catgtgcata atggtcagaa      480

aagtggagaa atccagctct ccatttccgt ctatcccgtg ggtctgcagg tgccgctgca      540

cctcccctgg cgttgggctg gcccccaggc acctcatggc caccatgagg tcggggggctt     600

tatcttcccc ctctgctgct gtcatacaag gagaagcatt tcttgtctca ttaatttggt      660

c                                                                     661
```

<210> 63
<211> 532
<212> DNA
<213> human

<220>
<221> misc_feature
<222> (519)..(519)
<223> N EQUALS ANY KIND OF BASE

<400> 63
```
taactatgga aaaccatgtt tatttttaat aaaggatgac atttccaatc agtaaaatat     60

cataaaagta taaaaatgta ctaagtacaa tcattagcat tatgttatag gggaatagtg     120

gttataactt ttccctgtaa gatggcacat tggatggtca cagttggctt gatttacaga     180

ggggcaagag taggtgacca gttgtaccag ttgctccagt ttcctaggat ttgggactct     240

tgtaaaatga gaaagtccca ggcaaactgg gacggttggt cctacaagaa aaagagcagc     300

atcagagtgt tggctatagt ttggaactta ggaacaggat cagacattat tttttaactt     360

ctccacctat tttcccttta gctgtgaaat aaaaatccct tttgttatta ctgagggtgt     420

tacagctttc agaggctttt ttaccactgg gtttcatgta attttgactt aataccatg      480

tcaagcctgg gaagaaaggc agttctaatc aacttgcang tgtggcattc tg             532
```

<210> 64
<211> 1013
<212> DNA
<213> human

<400> 64
```
atcattccta gaactgaagt tgaaaaggcc atcaggatgt cccggagccg tatcaatgat     60
```

```
gctttccgtc tgaatgacaa cagcctagag tttctgggga tacagccaac acttggacct    120

cctaaccagc cccctgtttc catatggctg attgtttttg gagttgtgat gggagtgata    180

gtggttggca ttgtcatcct gatcttcact gggatcagag atcggaagaa gaaaaataaa    240

gcaagaagtg gagaaaatcc ttatgcctcc atcgatatta gcaaaggaga aaataatcca    300

ggattccaaa acactgatga tgttcagacc tcctttttaga aaaatctatg tttttcctct    360

tgaggtgatt ttgttgtatg taaatgttaa tttcatggta tagaaaatat aagatgataa    420

agatatcatt aaatgtcaaa actatgactc tgttcagaaa aaaaattgtc caaagacaac    480

atggccaagg agagagcatc ttcattgaca ttgctttcag tatttatttc tgtctctgga    540

tttgacttct gttctgtttc ttaataagga ttttgtatta gagtatatta gggaaagtgt    600

gtatttggtc tcacaggctg ttcagggata atctaaatgt aaatgtctgt tgaatttctg    660

aagttgaaaa caaggatata tcattggagc aagtgttgga tcttgtatgg aatatggatg    720

gatcacttgt agaggacatt gcttttttcac ttccaaggtg cttgatcaac atctccctga    780

caacacaaaa ctagagccag gggcctccgt gaactcccag agcatgcctg atagaaactc    .840

atttctactg ttctctaact gtggagtgaa tggaaattcc aactgtatgt tcaccctctg    900

aagtgggtac ccagtctctt aaatctttg tatttgctca cagtgtttga gcagtgctga    960

gcacaaagca gacactcaat aaatgctaga tttacacaaa aaaaaaaaaa aaa          1013
```

<210> 65
<211> 2060
<212> DNA
<213> human

<400> 65
```
tgttcccagc actcaagcct tgccaccgcc gagccgggct tcctgggtgt ttcaggcaag     60

gaagtctagg tccctggggg gtgaccccca aggaaaaggc agcctccctg cgcacccggt    120

tgcccggagc cctctccagg gccggctggg ctgggggttg ccctggccag caggggcccg    180

ggggcgatgc cacccggtgc cgactgaggc caccgcacca tggcccgctc gctgacctgg    240

cgctgctgcc cctggtgcct gacggaggat gagaaggccg ccgcccgggt ggaccaggag    300

atcaacagga tcctcttgga gcagaagaag caggaccgcg gggagctgaa gctgctgctt    360

ttgggcccag gcgagagcgg gaagagcacc ttcatcaagc agatgcggat catccacggc    420

gccggctact cggaggagga gcgcaagggc ttccggcccc tggtctacca gaacatcttc    480

gtgtccatgc gggccatgat cgaggccatg gagcggctgc agattccatt cagcaggccc    540

gagagcaagc accacgctag cctggtcatg agccaggacc cctataaagt gaccacgttt    600

gagaagcgct acgctgcggc catgcagtgg ctgtggaggg atgccggcat ccgggcctgc    660

tatgagcgtc ggcgggaatt ccacctgctc gattcagccg tgtactacct gtcccacctg    720
```
```
                                          Page 86
```

```
gagcgcatca ccgaggaggg ctacgtcccc acagctcagg acgtgctccg cagccgcatg    780

cccaccactg gcatcaacga gtactgcttc tccgtgcaga aaaccaacct gcggatcgtg    840

gacgtcgggg gccagaagtc agagcgtaag aaatggatcc attgtttcga gaacgtgatc    900

gccctcatct acctggcctc actgagtgaa tacgaccagt gcctggagga gaacaaccag    960

gagaaccgca tgaaggagag cctcgcattg tttgggacta tcctggaact accctggttc   1020

aaaagcacat ccgtcatcct ctttctcaac aaaaccgaca tcctggagga gaaaatcccc   1080

acctcccacc tggctaccta tttccccagt ttccagggcc ctaagcagga tgctgaggca   1140

gccaagaggt tcatcctgga catgtacacg aggatgtaca ccgggtgcgt ggacggcccc   1200

gagggcagca agaagggcgc acgatcccga cgccttttca gccactacac atgtgccaca   1260

gacacacaga acatccgcaa ggtcttcaag gacgtgcggg actcggtgct cgcccgctac   1320

ctggacgaga tcaacctgct gtgacccagg ccccacctgg ggcaggcggc accggcgggc   1380

gggtgggagg tgggagtggc tgcagggacc ctagtgtcct ggtctatctc tccagcctcg   1440

gcccacacgc aagggagtcg ggggacggcc cgctgctggc cgctctcttc tctgcctctc   1500

accaggacag ccgcccccca gggtactcct gcccttgctt gactcagttt ccctcctttg   1560

aaagggaggg agcaaaacgg ccatttggga tgccagggtg gatgaaaagg tgaagaaatc   1620

aggggattga gacttgggtg ggtggcatc tctcaggagc cccatctccg ggcgtgtcac   1680

ctcctgggca gggttctggg accctctgtg ggtgacgcac accctgggat ggggctagta   1740

gagccttcag gcgccttcgg gcgtggactc tggcgcactc tagtggacag gagaaggaac   1800

gccttccagg aacctgtgga ctaggggtgc agggacttcc ctttgcaagg ggtaacagac   1860

cgctggaaaa cactgtcact ttcagagctc ggtggctcac agcgtgtcct gccccggttt   1920

gcggacgaga gaaatcgcgg cccacaagca tcccccatcc cttgcaggct gggggctggg   1980

catgctgcat cttaaccttt tgtatttatt ccctcacctt ctgcagggct ccgtgcgggc   2040

tgaaattaaa gatttcttag                                               2060
```

<210> 66
<211> 7265
<212> DNA
<213> human

<400> 66
```
catagagcca gcgggcgcgg gcgggacggg cgccccgcgg ccggacccag ccagggcacc     60

acgctgcccg gccctgcgcc gccaggcact tctttccggg gctcctaggg acgccagaag    120

gaagtcaacc tctgctgctt ctccttggcc tgcgttggac cttccttttt ttgttgtttt    180

tttttgtttt tccccttttct tccttttgaa ttaactggct tcttggctgg atgttttcaa    240

cttctttcct ggctgcgaac ttttccccaa ttgtttttcct tttacaacag ggggagaaag    300
```

```
tgctctgtgg tccgaggcga gccgtgaagt tgcgtgtgcg tggcagtgtg cgtggcagga   360

tgtgcgtgcg tgtgtaaccc gagccgcccg atctgtttcg atctgcgccg cggagccctc   420

cctcaaggcc cgctccacct gctgcggtta cgcggcgctc gtgggtgttc gtgcctcgga   480

gcagctaacc ggcgggtgct gggcgacggt ggaggagtat cgtctcgctg ctgcccgagt   540

cagggctgag tcacccagct gatgtagaca gtggctgcct tccgaagagt gcgtgtttgc   600

atgtgtgtga ctctgcggct gctcaactcc caacaaacca gaggaccagc cacaaactta   660

accaacatcc ccaaacccga gttcacagat gtgggagagc tgtagaaccc tgagtgtcat   720

cgactgggcc ttcttatgat tgttgtttta agattagctg aagatctctg aaacgctgaa   780

ttttctgcac tgagcgtttt gacagaattc attgagagaa cagagaacat gacaagtact   840

tctagctcag cactgctcca actactgaag ctgattttca aggctactta aaaaaatctg   900

cagcgtacat taatggattt ctgttgtgtt taaattctcc acagattgta ttgtaaatat   960

tttatgaagt agagcatatg tatatattta tatatacgtg cacatacatt agtagcacta  1020

cctttggaag tctcagctct tgcttttcgg gactgaagcc agttttgcat gataaaagtg  1080

gccttgttac gggagataat tgtgttctgt tgggacttta gacaaaactc acctgcaaaa  1140

aacugacagg cattaactac tggaacttcc aaataatgtg tttgctgatc gttttactct  1200

tcgcataaat attttaggaa gtgtatgaga attttgcctt caggaacttt tctaacagcc  1260

aaagacagaa cttaacctct gcaagcaaga ttcgtggaag atagtctcca cttttaatg  1320

cactaagcaa tcggttgcta ggagcccatc ctgggtcaga ggccgatccg cagaaccaga  1380

acgttttccc ctcctggact gttagtaact tagtctccct cctcccctaa ccaccccgc  1440

cccccccac cccccgcagt aataaaggcc cctgaacgtg tatgttggtc tcccgggagc  1500

tgcttgctga agatccgcgc ccctgtcgcc gtctggtagg agctgtttgc agggtcctaa  1560

ctcaatcggc ttgttgtgat gcgtatcccc gtagatgcca gcacgagccg ccgcttcacg  1620

ccgccttcca ccgcgctgag cccaggcaag atgagcgagg cgttgccgct gggcgccccg  1680

gacgccggcg ctgccctggc cggcaagctg aggagcggcg accgcagcat ggtggaggtg  1740

ctggccgacc acccgggcga gctggtgcgc accgacagcc ccaacttcct ctgctccgtg  1800

ctgcctacgc actggcgctg caacaagacc ctgcccatcg ctttcaaggt ggtggcccta  1860

ggggatgttc cagatggcac tctggtcact gtgatggctg gcaatgatga aaactactcg  1920

gctgagctga gaaatgctac cgcagccatg aagaaccagg ttgcaagatt taatgacctc  1980

aggtttgtcg gtcgaagtgg aagagggaaa agcttcactc tgaccatcac tgtcttcaca  2040

aacccaccgc aagtcgccac ctaccacaga gccatcaaaa tcacagtgga tgggccccga  2100

gaacctcgaa gacatcggca gaaactagat gatcagacca agcccgggag cttgtccttt  2160
```

```
tccgagcggc tcagtgaact ggagcagctg cggcgcacag ccatgagggt cagcccacac   2220

cacccagccc ccacgcccaa ccctcgtgcc tccctgaacc actccactgc ctttaaccct   2280

cagcctcaga gtcagatgca ggatacaagg cagatccaac catccccacc gtggtcctac   2340

gatcagtcct accaatacct gggatccatt gcctctcctt ctgtgcaccc agcaacgccc   2400

atttcacctg gacgtgccag cggcatgaca accctctctg cagaactttc cagtcgactc   2460

tcaacggcac ccgacctgac agcgttcagc gacccgcgcc agttccccgc gctgccctcc   2520

atctccgacc cccgcatgca ctatccaggc gccttcacct actccccgac gccggtcacc   2580

tcgggcatcg gcatcggcat gtcggccatg ggctcggcca cgcgctacca cacctacctg   2640

ccgccgccct accccggctc gtcgcaagcg cagggaggcc cgttccaagc cagctcgccc   2700

tcctaccacc tgtactacgg cgcctcggcc ggctcctacc agttctccat ggtgggcggc   2760

gagcgctcgc cgccgcgcat cctgccgccc tgcaccaacg cctccaccgg ctccgcgctg   2820

ctcaacccca gcctcccgaa ccagagcgac gtggtggagg ccgagggcag ccacagcaac   2880

tcccccacca acatggcgcc ctccgcgcgc ctggaggagg ccgtgtggag gccctactga   2940

ggcgccaggc ctggcccggc tgggccacgc gggccgccgc cttcgcctcc gggcgcgcgg   3000

gcctcctgtt cgcgacaagc ccgccgggat cccgggccct ggcccgggcc accgtcctgg   3060

ggccgagggc gcccgacggc caggatctcg ctgtaggtca ggcccgcgca gcctcctgcg   3120

cccagaagcc cacgccgccg ccgtctgctg gcgccccggc cctcgcggag gtgtccgagg   3180

cgacgcacct cgagggtgtc cgccggcccc agcacccagg ggacgcgctg gaaagcaaac   3240

aggaagattc ccggagggaa actgtgaatg cttctgattt agcaatgctg tgaataaaaa   3300

gaaagatttt ataccttga cttaactttt taaccaagtt gtttattcca aagagtgtgg   3360

aattttggtt ggggtggggg gagaggaggg atgcaactcg ccctgtttgg catctaattc   3420

ttattttaa ttttccgca ccttatcaat tgcaaaatgc gtatttgcat ttgggtggtt   3480

tttatttta tatacgttta tataaatata tataaattga gcttgcttct ttcttgcttt   3540

gaccatggaa agaaatatga ttcccttttc tttaagtttt atttaacttt tctttggac   3600

ttttgggtag ttgttttttt ttgttttgtt ttgttttttt gagaaacagc tacagctttg   3660

ggtcatttt aactactgta ttcccacaag gaatccccag atatttatgt atcttgatgt   3720

tcagacattt atgtgttgat aattttttaa ttatttaaat gtacttatat taagaaaaat   3780

atcaagtact acattttctt ttgttcttga tagtagccaa agttaaatgt atcacattga   3840

agaaggctag aaaaaaagaa tgagtaatgt gatcgcttgg ttatccagaa gtattgttta   3900

cattaaactc cctttcatgt taatcaaaca agtgagtagc tcacgcagca acgtttttaa   3960

taggattttt agacactgag ggtcactcca aggatcagaa gtatggaatt ttctgccagg   4020

ctcaacaagg gtctcatatc taacttcctc cttaaaacag agaaggtcaa tctagttcca   4080
```

```
gagggttgag gcgggtgcca ataattacat cttttggagag gatttgattt ctgcccaggg    4140

atttgctcac cccaaggtca tctgataatt tcacagatgc tgtgtaacag aacacagcca    4200

aagtaaactg tgtaggggag ccacatttac ataggaacca aatcaatgaa tttaggggtt    4260

acgattatag caatttaagg gccaccagaa gcaggcctcg aggagtcaat ttgcctctgt    4320

gtgcctcagt ggagacaagt gggaaaacat ggtcccacct gtgcgagacc ccctgtcctg    4380

tgctgctcac tcaacaacat cttttgtgttg ctttcaccag gctgagaccc taccctatgg    4440

ggtatatggg cttttacctg tgcaccagtg tgacaggaaa gattcatgtc actactgtcc    4500

gtggctacaa ttcaaaggta tccaatgtcg ctgtaaattt tatggcacta tttttattgg    4560

aggatttggt cagaatgcag ttgttgtaca actcataaat actaactgct gattttgaca    4620

catgtgtgct ccaaatgatc tggtggttat ttaacgtacc tcttaaaatt cgttgaaacg    4680

atttcaggtc aactctgaag agtatttgaa agcaggactt cagaacagtg tttgattttt    4740

attttataaa tttaagcatt caaattaggc aaatctttgg ctgcaggcag caaaaacagc    4800

tggacttatt taaaacaact tgtttttgag ttttcttata tatatattga ttatttgttt    4860

tacacacatg cagtagcact ttggtaagag ttaaagagta aagcagctta tgttgtcagg    4920

tcgttcttat ctagagaaga gctatagcag atctcggaca aactcagaat atattcactt    4980

tcatttttga caggattccc tccacaactc agtttcatat attattccgt attacatttt    5040

tgcagctaaa ttaccataaa atgtcagcaa atgtaaaaat ttaatttctg aaaagcacca    5100

ttagcccatt tcccccaaat taaacgtaaa tgtttttttt cagcacatgt taccatgtct    5160

gacctgcaaa aatgctggag aaaaatgaag gaaaaaatta tgttttcag tttaattctg    5220

ttaactgaag atattccaac tcaaaaccag cctcatgctc tgattagata atctttaca    5280

ttgaaccttt actctcaaag ccatgtgtgg aggggggcttg tcactattgt aggctcactg    5340

gattggtcat ttagagtttc acagactctt accagcatat atagtattta attgtttcaa    5400

aaaaaatcaa actgtagttg ttttggcgat aggtctcacg caacacattt ttgtatgtgt    5460

gtgtgtgtgc gtgtgtgtgt gtgtgtgtga aaaattgcat tcattgactt caggtagatt    5520

aaggtatctt tttattcatt gccctcagga aagttaaggt atcaatgaga cccttaagcc    5580

aatcatgtaa taactgcatg tgtctggtcc aggagaagta ttgaataagc catttctact    5640

gcttactcat gtccctattt atgatttcaa catggataca tatttcagtt cttttctttt    5700

ctcactatct gaaaatacat ttccctccct ctcttccccc caatatctcc ctttttttct    5760

ctcttcctct atcttccaaa ccccactttc tccctcctcc ttttcctgtg ttctcttaag    5820

cagatagcac ataccccac ccagtaccaa atttcagaac acaagaaggt ccagttcttc    5880

ccccttcaca taaaggaaca tggtttgtca gcctttctcc tgtttatggg tttcttccag    5940
```

Page 90

```
cagaacagag acattgccaa ccatattgga tctgcttgct gtccaaacca gcaaacttcc   6000

tgggcaaatc acaatcagtg agtaaataga cagcctttct gctgccttgg gtttctgtgc   6060

agataaacag aaatgctctg attagaaagg aaatgaatgg ttccactcaa atgtcctgca   6120

atttaggatt gcagatttct gccttgaaat acctgtttct ttgggacatt ccgtcctgat   6180

gattttatt tttgttggtt tttatttttg gggggaatga catgtttggg tcttttatac    6240

atgaaaattt gtttgacaat aatctcacaa aacatatttt acatctgaac aaaatgcctt   6300

tttgtttacc gtagcgtata catttgtttt gggatttttg tgtgtttgtt gggaattttg   6360

tttttagcca ggtcagtatt gatgaggctg atcatttggc tctttttttc cttccagaag   6420

agttgcatca acaaagttaa ttgtatttat gtatgtaaat agattttaag cttcattata   6480

aaatattgtt aatgcctata actttttttc aatttttttg tgtgtgtttc taaggacttt   6540

ttcttaggtt tgctaaatac tgtagggaaa aaatgcttct ttctaacttt gtttatttta   6600

gactttaaaa tgagctactt cttattcact tttgtaaaca gctaatagca tggttccaat   6660

ttttttttaag ttcactttt ttgttctagg ggaaatgaat gtgcaaaaaa agaaaaagaa   6720

ctgttggtta tttgtgttat tctggatgta taaaaatcaa tggaaaaaaa taaactttca   6780

aattgaaatg acggtataac acatctactg aaaaagcaac gggaaatgtg gtcctattta   6840

agccagcccc cacctagggt ctatttgtgt ggcagttatt gggtttggtc acaaaacatc   6900

ctgaaaattc gtgcgtgggc ttctttctcc ctggtacaaa cgtatggaat gcttcttaaa   6960

ggggaactgt caagctggtg tcttcagcca gatgacatga gagaatatcc cagaaccctc   7020

tctccaaggt gtttctagat agcacaggag agcaggcact gcactgtcca cagtccacgg   7080

tacacagtcg ggtgggccgc ctcccctctc ctgggagcat cgtcgtgcc cagcctgagc    7140

agggcagctg gactgctgct gttcaggagc caccagagcc ttcctctctt tgtaccacag   7200

tttcttctgt aaatccagtg ttacaatcag tgtgaatggc aaataaacag tttgacaagt   7260

acata                                                              7265
```

<210> 67
<211> 4221
<212> DNA
<213> human

<400> 67
```
gtcggccgtc ccctttaatt tttaaataca cggtcccctc ttttctctgg ggggggcaag    60

caagaaatca aagaaggagg agacaagccg tcaattttct ccaaaacaaa ccccaccggg   120

caatttggtc tcggggtagg gggagacggg gtgattgcaa attattccag gacgagatcc   180

agttctccag cgggaaaggg gcaaaggaac gccgcgcgtt ggaagggcca gggtacgcag   240

ctccccttgc agcgcccgca ggaccccgc aagctcgtgc cggcgaaatc ggagaccgcc    300
```

Page 91

```
gatctgtcct cgttctctcc tgcacgtctg gctgcattcg gaggaagacc tggggcgcga      360

gcgagcggcg acagcatgag cctgtgctga cctccgcgcg gcgggccgag cccagggctt      420

tgtcgcggta cctgcgccca gcccgcgccg caactctgtg cccagctttt gcaatctttt      480

gttgcagcgc tgaccgcacc aagttaaatg ctcccttgca attttctttt tttttgtttg      540

tttgtttaat ttttggagag ctcgcgatct tggaaaagcc tcagacgcca tctacagtta      600

aaacgtaggt aactgccctc tcccgcaccc cccccttaca cgcccccac cctttccacc      660

aaaaaaaggg ggtgcagcgc ggattctggc tgccgtgcgt cgccagccgg tagacccgtg      720

cttgtttcct ttctcttttt gtttggcttc taacgcgttg ggactgagtc gccgccgtga      780

gctccccgaa gactgcacaa actaccgcgg gctcctccgc cccgtctgcg attcggaagc      840

cggcctgggg gtcgcgtcgg gagccctgcg ctgcagctcc gcaccttagc agcccgggta      900

ctcatccaga tccacgccgg ggacacacac acagagtaac taaaagtgcg gcgattctgc      960

acatcgccga ctgctttggg gtaacaaaaa gacccgagtt gcctgccgac cgaggacccc     1020

cgggagccgg gctcggagca gacgaggtat ccggcggcgc ccatttgggg gcttctaact     1080

ctttctccac gcagcccctc ttctgtcccc tcccctctcg ctcccttttta aaatcagtgg     1140

caccgaggcg cctgcagccg cactcgccag cgactcatct ctccagcggg ttttttttttg     1200

tttgtcgtgt gcgatcctca cactcatgaa catacacagg tctacccca tcacaatagc     1260

gagatatggg agatcgcgga acaaaaccca ggatttcgaa gagttgtcgt ctataaggtc     1320

cgcggagccc agccagagtt tcagcccgaa cctcggctcc ccgagcccgc ccgagactcc     1380

gaacttgtcg cattgcgttt cttgtatcgg gaaatactta ttgttggaac ctctggaggg     1440

agaccacgtt tttcgtgccg tgcatctgca cagcggagag gagctggtgt gcaaggtgtt     1500

tgatatcagc tgctaccagg aatccctggc accgtgcttt gcctgtctg ctcatagtaa     1560

catcaaccaa atcactgaaa ttatcctggg tgagaccaaa gcctatgtgt tctttgagcg     1620

aagctatggg gacatgcatt ccttcgtccg cacctgcaag aagctgagag aggaggaggc     1680

agccagactg ttctaccaga ttgcctcggc agtggcccac tgccatgacg gggggctggt     1740

gctgcgggac ctcaagctgc ggaaattcat ctttaaggac gaagagagga ctcgggtcaa     1800

gctggaaagc ctggaagacg cctacattct gcggggagat gatgattccc tctccgacaa     1860

gcatggctgc ccggcttacg taagcccaga gatcttgaac accagtggca gctactcggg     1920

caaagcagcc gacgtgtgga gcctggggggt gatgctgtac accatgttgg tggggcggta     1980

cccctttccat gacattgaac ccagctccct cttcagcaag atccggcgtg ccagttcaa     2040

cattccagag actctgtcgc ccaaggccaa gtgcctcatc cgaagcattc tgcgtcggga     2100

gccctcagag cggctgacct cgcaggaaat tctggaccat ccttggtttt ctacagattt     2160

tagcgtctcg aattcagcat atggtgctaa ggaagtgtct gaccagctgg tgccggacgt     2220
```

```
caacatggaa gagaacttgg acccttctt taactgagct catgccccac ggagacttag    2280

caggttccag gagtgagcga gggcagcgga aaggagttct ccgggggac acgaattgcc    2340

tggctgagta gcaagaaaga cacactctta agtttcttgg ttcagagcag gaaaaccttc    2400

aaggagctga ctgaccacgt agcatggggg caagaggcgt gggatgggga ttggggtgag    2460

atggatggga gcccgctgga gcttgtcttc cctaacatag cctgggagac cacccccttgc   2520

cacttgggcc acttccgcct accccacttt tcattttgtt ccaaaatagt tgcagatcct    2580

gacagaatca aaactctctg cctcaaacac acatcctggc atcgcactgt tagcatttaa    2640

cttcttgtta ggattcaggg aaggaacagt tggccaagaa ttttttttct tttaaacaag    2700

ccaaccacct agctggtaat taatgaggtt cacttaaaaa aaaaattcgg tgcacacaga    2760

ctgacatgaa acctgggtgc tacagtaaaa gaaacaaaa gtccagtttg tgtctcttaa     2820

tcgctcactt caactcattt cttctaaata aactatttaa tatcctggtc aggaaatgac    2880

atgttaatgc tttgctccct gaaggggggaa aaaatctgtc ctttaacaag ctattctgtt   2940

ttgtgtcaat tgggtccgtg gcaaggaagc tattaggaag tcaaacggtc caggatgcat    3000

tacctgctaa tccttaggtt taaagggggga aagaaaaggg aagaagaaag gaaaagagaa    3060

aiccaacicc iiiiicaigi iiigciiiig aacaaigagg giiigigiga caggcaiicc    3120

tctttgctga gatgatagca atggcctgag attttagcaa gctcctggag tctgatgctt    3180

ttgcagtact ctgatcgcaa ctaaacattt gtctttgttt tattagaaac tagtgaaaca    3240

aagcaggttg tcccacatgt ataaaataca gggcagctat ttagttttct ttacagagaa    3300

tgatcctttt aaggcttgta aggccctctg gtttggacaa aaaccctcag tagagacaag    3360

cgggaaggat aattagctga aagctatgat gatataaata aaaacagctc tctatcccaa    3420

tacgcacctt tgtattttca agaactcttc tatttattaa ggaaatgtc acattgtgat     3480

gtattaagcc agtacttcaa ttacgggttg acttgggatg acatattaca tgctgtagtt    3540

aacatttata attctttttc cttgtttgag tatttctgtc tctgaaataa cctttтactt    3600

ggcttttcta gatagcttta tttgatttcg agtggcaaaa tgttttttat tacggctttt    3660

ctattgctgt atgatacaga actcttttgg cataaatatt tgtgttccca gtacctcact    3720

tgttcggatt tgactgcctg tatatgtttt gtgaaatggt cctgtttttg ggtaggtgac    3780

acgtggactc tagtatgtaa atgttacttg aatctgtgct tcataatagt gtgtggcatg    3840

tatgtgcaga ctcttggatg ctttatgcct gcgcaccagg agccctgtcc tcacgttccc    3900

aggagggcgg cttcacccct cgtaaccagg agacaaggcg gccatggatt tgcccttgat    3960

tctattttgc taatggaaga tagaaaggag agaaggtttt ttttttttttt taacattctg    4020

aagatggtgc tgtgtcaaga aggacctttt ttttcccctc tcccctattt tttaagtacc    4080
```

```
ttggaggagg agaggttggt gacatgcatg gtggggatct atggcctctg gtgctttgtc   4140

ctgtatttgg tttaatgttt ttgtcctaat ctcttcaatc aataaaattg tgcgtattta   4200

actaaaaaaa aaaaaaaaaa a                                              4221
```

<210> 68
<211> 524
<212> DNA
<213> human

<400> 68
```
ccctgccttc caccttggaa gaggaggctg gacgcatcag cagtggccag gcaggtcgca    60

aaatctccca gcctagagac cacacctgaa acggctgaag ccagcttgca caagggctgc   120

tgtccctctg cggcaggcag agctggtggg ggcaggggtc acagagcagt catagacacc   180

atggaccagg caggagaagg gcagatggca catgggcaca acagggcctt gtccttagag   240

cactgggggg tcatggctgg gaggggcatg gcaggggctg gcatccctgt agagccagag   300

gggccaccca ggcagtgaca ttccagatat gttgggctca cctcatcctt gctgtgagac   360

tggagttcca tggggacatg aagtcagtac accgcagagc tgctcagctg ctctacctct   420

cgctgacttt tttgttgcac atatacattt tctttcaatt agcatttatt tcagctttta   480

tttaagcttt ttgacagtac atgtaaatat atgattataa ccat                    524
```

<210> 69
<211> 4151
<212> DNA
<213> human

<400> 69
```
gggaatagca gaataggagc aagccagcac tagtcagcta actaagtgac tcaaccaagg    60

ccttttttcc ttgttatctt tgcagatact tcattttctt agcgtttctg gagattacaa   120

catcctgcgg ttccgtttct gggaacttta ctgatttatc tccccctca cacaaataag    180

cattgattcc tgcatttctg aagatctcaa gatctggact actgttgaaa aaatttccag   240

tgaggctcac ttatgtctgt aaagatggga aaaaaataca agaacattgt tctactaaaa   300

ggattagagg tcatcaatga ttatcatttt agaatggtta agtccttact gagcaacgat   360

ttaaaactta atttaaaaat gagagaagag tatgacaaaa ttcagattgc tgacttgatg   420

gaagaaaagt tccgaggtga tgctggtttg ggcaaactaa taaaaatttt cgaagatata   480

ccaacgcttg aagacctggc tgaaactctt aaaaaagaaa agttaaaagt aaaaggacca   540

gccctatcaa gaaagaggaa gaaggaagtg catgctactt cacctgcacc tccacaagc   600

agcactgtca aaactgaagg agcagaggca actcctggag ctcagaaaag aaaaaaatca   660

accaaagaaa aggctggacc caaagggagt aaggtgtccg aggaacagac tcagcctccc   720

tctcctgcag gagccggcat gtccacagcc atgggccgtt ccccatctcc caagacctca   780
```

```
ttgtcagctc caccccaacag ttcttcaact gagaacccga aaacagtggc caaatgtcag   840

gtaactccca gaagaaatgt tctccaaaaa cgcccagtga tagtgaaggt actgagtaca   900

acaaagccat ttgaatatga daccccagaa atggagaaaa aaataatgtt tcatgctaca   960

gtggctacac agacacagtt cttccatgtg aaggttttaa acaccagctt gaaggagaaa  1020

ttcaatggaa agaaaatcat catcatatca gattatttgg aatatgatag tctcctagag  1080

gtcaatgaag aatctactgt atctgaagct ggtcctaacc aaacgtttga ggttccaaat  1140

aaaatcatca acagagcaaa ggaaactctg aagattgata ttcttcacaa acaagcttca  1200

ggaaatattg tatatggggt atttatgcta cataagaaaa cagtaaatca gaagaccaca  1260

atctacgaaa ttcaggatga tagaggaaaa atggatgtag tggggacagg acaatgtcac  1320

aatatcccct gtgaagaagg agataagctc cagctttct gctttcgact tagaaaaaag  1380

aaccagatgt caaaactgat ttcagaaatg catagtttta tccagataaa gaaaaaaaca  1440

aacccgagaa acaatgaccc caagagcatg aagctacccc aggaacagcg tcagcttcca  1500

tatccttcag aggccagcac aaccttccct gagagccatc ttcggactcc tcagatgcca  1560

ccaacaactc catccagcag tttcttcacc aagaaaagtg aagacacaat ctccaaaatg  1620

aatgacttca tgaggatgca gatactgaag gaagggagtc attttccagg accgttcatg  1680

accagcatag gcccagctga gagccatccc cacactcctc agatgcctcc atcaacacca  1740

agcagcagtt tcttaaccac gttgaaacca agactgaaga ctgaacctga agaagtttcc  1800

atagaagaca gtgcccagag tgacctcaaa gaagtgatgg tgctgaacgc aacagaatca  1860

tttgtatatg agcccaaaga gcagaagaaa atgtttcatg ccacagtggc aactgagaat  1920

gaagtcttcc gagtgaaggt ttttaatatt gacctaaagg agaagttcac cccaaagaag  1980

atcattgcca tagcaaatta tgtttgccgc aatgggttcc tggaggtata tcctttcaca  2040

cttgtggctg atgtgaatgc tgaccgaaac atggagatcc caaaaggatt gattagaagt  2100

gccagcgtaa ctcctaaaat caatcagctt tgctcacaaa ctaaaggaag ttttgtgaat  2160

ggggtgtttg aggtacataa ggtaagccca caccattgtt ttataaaatt tctcctgcaa  2220

cctccaattt ttaaagtctt aacttgtcaa ctggagtttg gtcaacttac tcaacacaga  2280

aaatcaaccc cttcacccctt cccccagcac tagagataat tgaatagagt tcatttcagg  2340

atatggggta cgttatattg taacattcct cttcttaagg tatcatcatg caagttattt  2400

agacagtcac taggaaactt ggcattttat tagttttgat gatctattca gagccaccct  2460

tgtccaggac agtgcagagt ttatatcaac acacatatcc ttaggatttt gtttctttga  2520

gttcttctcc atctgtatca atgacaactt aatttaattg tgaataaaag agttgctctc  2580

ccaagcctga atcctgattg tgacaaccag agtaagaaat aaaatagact actctgcttt  2640
```

Page 95

```
agaatgcagc tatgtctaac agttagctag aattctgatc atttggactc caaagtttct   2700

tgcctcttct cattcattaa ttcatcagga gactgtagag caactaactt ctgcattaaa   2760

taataagaga aatacgaagc aaaaagacta aaaaagtcac gtagcttaac tgctcaattt   2820

ataaatgggg caataaaatg caaaaaaaaa gaaaaaaagc ttggtgaatt cttaggctta   2880

cagtgtgcct ttcagtctct acacatcatg taaatattat gcttagctga tttaacttct   2940

tgtttgaagt actgtttcat actccattat acatgtcttc tagggtggct tactttttaat  3000

tgtgctgttt tctctacact cagtttaaat gactgtacat atatatgtgg ttggagagtt   3060

aatgaataat gagctacaaa ccagaacaat gtgactagat agataggatg atctagaatt   3120

gagaactggc agattgggaa aagagtggct atatggagaa agaaagaaag tagttccata   3180

ttgaaataac agtctactta atgaggaccg ttgcaacatt ctttctcaaa cttacaaagt   3240

gccataaaaa gcctctattc tctgctcttg ggcaggtgtg aaagaaacct accaaattaa   3300

tcagattttt ctgtatccag gctccttaaa aaatcccagc tgtgctgatg tggaaacagg   3360

aagaattagg aaagtaatca attttttttc ctagaaaaaa tccagcagac aaagaacttc   3420

aacaaagag gctcaaggga ggagttgaaa ggcaggattc aaagaccaag tatcttaagc   3480

tatttggtac ctgttattca ggacctacag ctctgtttac tctatcaaag accaaaagtt   3540

tccagaaaca ccctgtattt ctcatagatt tgaaaattat tgatccagtt tcagaagata   3600

agtgttaatt ttcttttgca gaaaaatgta aggggtgaat tcacttatta tgaaatacaa   3660

gataatacag ggaagatgga agtggtggtg catggacgac tgaccacaat caactgtgag   3720

gaaggagata aactgaaact cacctgcttt gaattggcac cgaaaagtgg gaataccggg   3780

gagttgagat ctgtaattca tagtcacatc aaggtcatca agaccaggaa aaacaagaaa   3840

gacatactca atcctgattc caagtatgga aacttcacca gactttttct tctaaaatct   3900

ggatgtcatt gacgataatg tttatggaga taaggtctaa gtgcctaaaa aaatgtacat   3960

atacctggtt gaaatacaac actatacata cacaccacca tatatactag ctgttaatcc   4020

tatggaatgg ggtattggga gtgctttttt aattttcat agtttttttt taataaaatg   4080

gcatattttg catctacaac ttctataatt tgaaaaaata aataaacatt atctttttg    4140

tgaaaaaaaa a                                                        4151
```

<210> 70
<211> 741
<212> DNA
<213> human

<220>
<221> misc_feature
<222> (492)..(492)
<223> N EQUALS ANY KIND BASE

<220>
<221> misc_feature
<222> (652)..(652)
<223> N EQUALS ANY KIND BASE

<220>
<221> misc_feature
<222> (696)..(696)
<223> N EQUALS ANY KIND BASE

<220>
<221> misc_feature
<222> (707)..(707)
<223> N EQUALS ANY KIND BASE

<400> 70
```
tttgcttttg  tttcttctgg  tcccatcact  gggacctaaa  agaagctcac  atgtggtctc        60

tggaaatgct  gaagctgtgg  actgtagaca  ttattttcag  tccttgtcct  ggtggctgca       120

taccagatgc  tgctccttcc  ctgtgtgtgg  ccagctgtac  acagtgacat  gctcccaagg       180

ccgcggcaca  ggcggtgatg  ggaactcctc  cccgggccag  cctctcaggc  tgcagcccca       240

cggcaccctg  aggccctcat  ctctgctcgg  cagctaaaac  atctccttct  tcgatgctct       300

gcaactgcag  cctctggctc  acaagagttc  tgctgcctcg  gcggcccccg  aagccgcccc       360

ccgggacagt  ccgtgctgta  accaagaccc  ctggcaaagc  ctcctcccca  aataagttga       420

ttttggcttc  ggcctcaatg  gctttggcca  agcttgctgc  gtaactgtcc  aaggacttgt       480

gtacttcagc  tntcacatga  agaatcgagt  tcttggcagc  ttctttgatt  tgttccactt       540

catcctcaaa  tgtcaccgag  ctccttctct  ttggtgggca  agtgcagtga  gaagggaggg       600

tgtcatcaga  cgtgtgtcct  caagcagcat  catatctgtc  cctgagtcct  gngagcagct       660

gaaaccagtg  tcccccgtgc  tgctgctgtg  ccccangggc  tgtccgnctg  ccatgagcgc       720

aatgagtgtg  ggacaggccc  c                                                    741
```

<210> 71
<211> 755
<212> DNA
<213> human

<220>
<221> misc_feature
<222> (643)..(643)
<223> N EQUALS ANY KIND BASE

<220>
<221> misc_feature
<222> (741)..(741)
<223> N EQUALS ANY KIND BASE

<400> 71

```
tggtagtgaa  tactttattt  tgttgtaaac  aagttagttt  tgagggtatt  tcctcgtggt      60

cctcctgccg  tcactcgtcc  ccatgttcca  atgatgctga  tcaactgctt  tattcagttt     120

cccatctttc  ttcttgccca  ggcatcgtag  cctttctttt  tttaaacaca  tgatccctag     180

tactcatctt  tggaggacaa  aaggctttcc  atatgttaga  aaaatttgaa  tctcatagta     240

ctcacaacaa  tgagcagcat  tgtaagttgt  gatgcattca  tttggattgg  aacattctca     300

atcagtcctt  ccactctaag  taaatatttg  tttctcacag  aacacaaggc  agttcaaaag     360

gcctcttggt  taaggaatta  tagggtgttg  aatgggaaac  atcatacaag  cagtgaaaac     420

aaaaatcttt  ccaggttgtc  ggattttctc  cttcttggtc  ttataaaaag  caactagaca     480

tctctaattt  aaaaaataca  tgcacatata  tacaatagtg  attggaatgt  attcttatcc     540

aaaacattat  agagtttatc  tcagatatac  tgagtactgt  cactcagtct  gtaaattacc     600

cccaagaagg  tgggttgttt  cctcattcct  taaataaaaa  cangatcgaa  taacagacca     660

aaaagaagtt  actaaatttt  aacactgaca  tccttgtgaa  gagccagtct  ttacaggcgt     720

ttgtaaagta  gactgtgggg  nagtgtacac  taata                                 755
```

<210> 72
<211> 1894
<212> DNA
<213> human

<400> 72

```
aggactcggg  ccggagcgtg  gccggacccc  cacccgccga  ggggcccagg  gaggacgcgg      60

cagagtcacg  gtggcagcat  tgagagttgg  acacccgggt  ccttgaagtg  atctctaggc     120

cccagcccca  aatccgccac  cattccgtgc  tgcggggaca  ccatggctcc  agaagaggac     180

gctggagggg  aggccttagg  gggcagtttc  tgggaggctg  gcaactacag  gcgcacggta     240

cagcgggtgg  aggacgggca  ccggctgtgc  ggggacctgg  tcagctgctt  ccaggagcgc     300

gcccgcatcg  agaaggctta  tgcccagcag  ttggctgact  gggcccgaaa  gtggagggg      360

accgtggaga  agggccccca  gtatggcaca  ctggagaagg  cctggcatgc  ctttttcacg     420

gcggctgagc  ggctgagcgc  gctgcacctg  gaggtgcggg  agaagctgca  agggcaggac     480

agtgagcggg  tgcgcgcctg  gcagcggggg  gctttccacc  ggcctgtgct  gggcggcttc     540

cgcgagagcc  gggcggccga  ggacggcttc  cgcaaggccc  agaagccctg  gctgaagagg     600

ctgaaggagg  ttgaggcttc  caagaaaagc  taccacgcag  cccggaagga  tgagaagacc     660

gcccagacga  gggagagcca  cgcaaaggca  gacagcgccg  tctcccagga  gcagctgcgc     720

aaactgcagg  aacgggtgga  acgctgtgcc  aaggaggccg  agaagacaaa  agctcagtat     780

gagcagacgc  tggcagagct  gcatcgctac  actccacgct  acatggagga  catggaacag     840
```

```
gcctttgaga cctgccaggc cgccgagcgc cagcggcttc ttttcttcaa ggatatgctg    900

ctcaccttac accagcacct ggacctttcc agcagtgaga agttccatga actccaccgt    960

gacttgcacc agggcattga ggcagccagt gacgaagagg atctgcgctg gtggcgcagc   1020

acccacgggc caggcatggc catgaactgg ccacagttcg aggagtggtc cttggacaca   1080

cagaggacaa tcagccggaa agagaagggt ggccggagcc ctgatgaggt taccctgacc   1140

agcattgtgc ctacaagaga tggcaccgca cccccacccc agtccccggg gtccccaggc   1200

acggggcagg atgaggagtg gtcagatgaa gagagtcccc ggaaggctgc caccggggtt   1260

cgggtgaggg cactctatga ctacgctggc caggaagctg atgagctgag cttccgagca   1320

ggggaggagc tgctgaagat gagtgaggag gacgagcagg gctggtgcca aggccagttg   1380

cagagtggcc gcattggcct gtaccctgcc aactacgtgg agtgtgtggg cgcctgagtg   1440

tcctgacagc ccttctgcaa cgtttaccca ccctggttca gagcccagct tctcctggag   1500

agccggaccc tcagggccct gaaccgtcgc tctctggctg ctcctctgtc ccttgaggga   1560

ggaagtcctg ggacccaggg aggggagggg cctttgtcta gggaagggac tggtagggaa   1620

gggacgagtc taggctgagg gcaagatggg aggtcagagg tgacagaagc gttcaggggt   1680

gcctgggcct ccccaggagc tgtggactca gttcctgacc tctactttgg ggttcctggg   1740

gtgggcttgg ggtgagtgta gttctggcct agcagcaccc tcttgtggct tgttctagcg   1800

tgtattaaaa cttgacacac acccacacac aaaaccaaaa aaaaaaaaaa aaaaaaaaaa   1860

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa                                1894
```

<210> 73
<211> 649
<212> DNA
<213> human

<400> 73
```
ggcgaggcgt ctcggagtct cagagacacc aaggcccctg cgacaaggtg gctgcagcta     60

ggccgggggc gtcaggacga cggagcgggt tcgggtcggt gacacgcaga cctgagggag    120

ctgggcccgc cttttccgcc cgcgccccag gcccttgcag atcgagattt gcgtcctaga    180

gtgggaaaaa agcagaggcc agggcgccga ttttattt gg agagaagcaa gcatctttgc    240

ctctttggag taggaaattc agacttgaaa aagtggtgtg tggttgactc tgtttctcgc    300

catgtcttct cacaagactt tcaccattaa gcgattcctg gccaagaaac aaaagcaaaa    360

tcgtcccatc ccccagtgga ttcagatgaa acctggtagt aaaatcaggt acaactccaa    420

aaggaggcat tggagaagaa ccaagctggg tctataagga attgcacatg agatggcaca    480

catatttatg ctgtatcaag ttcacgatca tcttacgata tcaagctgaa aatgtcacca    540

ctacctggac agttgcacat gttttactgg gaatattttt ttctgttttt ctgtatgctc    600
```

tgtgctagta gggtggattc agtaataaat atgtgaaagc ttttgtttc   649

<210>   74
<211>   1561
<212>   DNA
<213>   human

<400>   74
gcggcgcgga gggcgcgggc ccgggagcca gggagcgagc ggggcgcccg gcagcgcgga   60

gtcagcgccg cgggggccgc acccgactcg cgcctggaca ctcgcggggc gccgacctgg   120

caggggggcca aaccagtgct cctgccacct ctctggctgc ccccctagagc ctgcccatcc   180

cagcctgacc aatgtccaca gccagggagc agccaatctt cagcacacgg gcgcacgtgt   240

tccaaattga cccagccacc aagcgaaact ggatcccagc gggcaagcac gcactcactg   300

tctcctatttt ctacgatgcc acccgcaatg tgtaccgcat catcagcatc ggaggcgcca   360

aggccatcat caacagcact gtcactccca acatgacctt caccaaaact tcccagaagt   420

tcgggcagtg ggccgacagt cgcgccaaca cagtctacgg cttgggcttt gcctctgaac   480

agcatctgac acagtttgcc gagaagttcc aggaagtgaa ggaagcagcc aggctggcca   540

gggagaaatc tcaggatggc ggggagctca ccagtccagc cctggggctc gcctcccacc   600

aggtgccccc gagccctctc gtcagtgcca acggccccgg cgaggaaaaa ctgttccgca   660

gccagagcgc tgatgccccc ggccccacag agcgcgagcg gctaaagaag atgttgtctg   720

agggctccgt gggcgaggta cagtgggagg ccgagttttt cgcactgcag gacagcaaca   780

acaagctggc aggcgccctg cgagaggcca cgccgccgc agcccagtgg aggcagcagc   840

tggaggctca gcgtgcagag gccgagcggc tgcggcagcg ggtggctgag ctggaggctc   900

aggcagcttc agaggtgacc cccaccggtg agaaggaggg gctgggccag ggccagtcgc   960

tggaacagct ggaagctctg gtgcaaacca aggaccagga gattcagacc ctgaagagtc   1020

agactggggg gccccgcgag gccctggagg ctgccgagcg tgaggagact cagcagaagg   1080

tgcaggacct ggagacccgc aatgcggagt tggagcacca gctgcgggcg atggagcgca   1140

gcctggagga ggcacgggca gagcgggagc gggcgcgggc tgaggtgggc cgggcagcgc   1200

agctgctgga cgtcaggctg tttgagctga gtgagctgcg tgagggcctg gcccgcctgg   1260

ctgaggctgc gccctgagcc ggggctggtt ttctatgaac gattccggcc tgggatgcgg   1320

gccaggctgc aggcggcata gttgggccca ttcgtcctgg aaagggactg gggggtccca   1380

acttagccct gggtgggccg ggccgggctg ggctggggtg ggccccagtc ggctctggtt   1440

gttggcagct ttggggctgt ttttgagctt ctcattgtgt agaatttcta gatcccccga   1500

ttacatttct aagcgtgaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa   1560

a   1561

```
<210>  75
<211>  1188
<212>  DNA
<213>  human

<400>  75
tcgagatcca ttgtgctcta aaggctcgcc ctcctgtgca tcgcggctaa tttgggggtat      60

cactgagctg aagacaaaga gaaggggggag aaaacctagc agaccaccat gtgctatggg     120

aagtgtgcac gatgcatcgg acattctctg gtggggctcg ccctcctgtg catcgcggct     180

aatattttgc tttactttcc caatggggaa acaaagtatg cctccgaaaa ccacctcagc     240

cgcttcgtgt ggttcttttc tggcatcgta ggaggtggcc tgctgatgct cctgccagca     300

tttgtcttca ttgggctgga acaggatgac tgctgtggct gctgtggcca tgaaaactgt     360

ggcaaacgat gtgcgatgct ttcttctgta ttggctgctc tcattggaat tgcaggatct     420

ggctactgtg tcattgtggc agcccttggc ttagcagaag gaccactatg tcttgattcc     480

ctcggccagt ggaactacac ctttgccagc accgagggcc agtaccttct ggatacctcc     540

acatggtccg agtgcactga acccaagcac attgtggaat ggaatgtatc tctgtttcct     600

atcctcttgg ctcttggtgg aattgaattc atcttgtgtc ttattcaagt aataaatgga     660

gtgcttggag gcatatgtgg cttttgctgc tctcaccaac agcaatatga ctgctaaaag     720

aaccaaccca ggacagagcc acaatcttcc tctatttcat tgtaatttat atatttcact     780

tgtattcatt tgtaaaactt tgtattagtg taacatactc cccacagtct acttttacaa     840

acgcctgtaa agactggcat cttcacagga tgtcagtgtt taaatttagt aaacttcttt     900

tttgtttgtt tatttgtgta acatactccc cacagtctac ttttacaaac gcctgtaaag     960

actggcatct tcacaggatg tcagtgttta aatttagtaa acttcttttt tgtttgttta    1020

tttgtttttg ttttttttta aggaatgagg aaacaaacca ccctctgggg gtagtttaca    1080

gactgagtga cagtactcag tatatctgag ataaactcta taatgttttg gataaaaata    1140

acattccatg gcacatatat acaatagtga ttggctttag agcacaat                 1188


<210>  76
<211>  1075
<212>  DNA
<213>  human

<400>  76
cgcagcaaac acatccgtag aaggcagcgc ggccgccgag agccgcagcg ccgctcgccc      60

gccgccccc accccgccgc cccgcccggc gaattgcgcc ccgcgcccct cccctcgcgc     120

ccccgagaca aagaggagag aaagtttgcg cggccgagcg gggcaggtga ggagggtgag     180

ccgcgcggga ggggcccgcc tcggccccgg ctcagccccc gccgcgccc ccagcccgcc     240

gccgcgagca gcgcccggac ccccagcgg cggccccgc ccgcccagcc ccccggcccg     300
```

```
ccatgggcgc cgcggcccgc accctgcggc tggcgctcgg cctcctgctg ctggcgacgc    360

tgcttcgccc ggccgacgcc tgcagctgct ccccggtgca cccgcaacag gcgttttgca    420

atgcagatgt agtgatcagg gccaaagcgg tcagtgagaa ggaagtggac tctggaaacg    480

acatttatgg caaccctatc aagaggatcc agtatgagat caagcagata aagatgttca    540

aagggcctga gaaggatata gagtttatct acacggcccc ctcctcggca gtgtgtgggg    600

tctcgctgga cgttggagga aagaaggaat atctcattgc aggaaaggcc gagggggacg    660

gcaagatgca catcaccctc tgtgacttca tcgtgccctg ggacaccctg agcaccaccc    720

agaagaagag cctgaaccac aggtaccaga tgggctgcga gtgcaagatc acgcgctgcc    780

ccatgatccc gtgctacatc tcctccccgg acgagtgcct ctggatggac tgggtcacag    840

agaagaacat caacgggcac caggccaagt tcttcgcctg catcaagaga agtgacggct    900

cctgtgcgtg gtaccgcggc gcggcgcccc ccaagcagga gtttctcgac atcgaggacc    960

cataagcagg cctccaacgc ccctgtggcc aactgcaaaa aaagcctcca agggtttcga   1020

ctggtccagc tctgacatcc cttcctggaa acagcatgaa taaaacactc atccc         1075
```

<210> 77
<211> 1358
<212> DNA
<213> human

<400> 77
```
gcgacccggg gcgtttgcag cggtgccgag gaagaggacg ggaacggtgt tacgattgcc     60

tgcgtttagg aggtggctgc gttgtgggaa aagctatcaa ggaagaaatt gccaaaccat    120

gtcttttttt ctgttttcag agtagttcac aacagatctg agtgttttaa ttaagcatgg    180

aatacagaaa acaacaaaaa acttaagctt taatttcatc tggaattcca cagttttctt    240

agctccctgg acccggttga cctgttggct cttcccgctg gctgctctat cacgtggtgc    300

tctccgacta ctcaccccga gtgtaaagaa ccttcggctc gcgtgcttct gagctgctgt    360

ggatggcctc ggctctctgg actgtccttc cgagtaggat gtcactgaga tccctcaaat    420

ggagcctcct gctgctgtca ctcctgagtt tctttgtgat gtggtacctc agccttcccc    480

actacaatgt gatagaacgc gtgaactgga tgtacttcta tgagtatgag ccgatttaca    540

gacaagactt tcacttcaca cttcgagagc attcaaactg ctctcatcaa aatccatttc    600

tggtcattct ggtgacctcc caccccttcag atgtgaaagc caggcaggcc attagagtta    660

cttgggggtga aaaaaagtct tggtggggat atgaggttct tacatttttc ttattaggcc    720

aagaggctga aaaggaagac aaaatgttgg cattgtcctt agaggatgaa caccttcttt    780

atggtgacat aatccgacaa gatttttttag acacatataa taacctgacc ttgaaaacca    840

ttatggcatt caggtgggta actgagtttt gccccaatgc caagtacgta atgaagacag    900
```
Page 102

```
acactgatgt tttcatcaat actggcaatt tagtgaagta tcttttaaac ctaaaccact    960

cagagaagtt tttcacaggt tatcctctaa ttgataatta ttcctataga ggatttttacc   1020

aaaaaaccca tatttcttac caggagtatc ctttcaaggt gttccctcca tactgcagtg   1080

ggttgggtta tataatgtcc agagatttgg tgccaaggat ctatgaaatg atgggtcacg   1140

taaaacccat caagtttgaa gatgtttatg tcgggatctg tttgaattta ttaaaagtga   1200

acattcatat tccagaagac acaaatcttt tctttctata tagaatccat ttggatgtct   1260

gtcaactgag acgtgtgatt gcagcccatg gctttttcttc caaggagatc atcacttttt   1320

ggcaggtcat gctaaggaac accacatgcc attattaa                          1358
```

```
<210>    78
<211>    1246
<212>    DNA
<213>    human

<400>    78
ggaaaggcct tggaaagcag tcgttgcgcc agacagccca gggaagagcg gcagcctgag     60

gacctagggc cacctgctgt tccctgggat tcatgtcctt ctggggagga gggaggaccc    120

aggacaatgg ctgctgttca tgatctggag atggagagca tgaatctgaa tatgggggga    180

gagatgaaag aagagctgga ggaagaggag aaaatgagag aggatggggg aggtaaagat    240

cgggccaaga gtaaaaaggt ccacaggatt gtctcaaaat ggatgctgcc cgaaaagtcc    300

cgaggaacat acttggagag agctaactgc ttcccgcctc ccgtgttcat catctccatc    360

agcctggccg agctggcagt gtttatttac tatgctgtgt ggaagcctca gaaacagtgg    420

atcacgttgg acacaggcat cttggagagt ccctttatct acagtcctga gaagagggag    480

gaagcctgga ggtttatctc atacatgctg gtacatgctg gagttcagca catcttgggg    540

aatctttgta tgcagcttgt tttgggtatt cccttggaaa tggtccacaa aggcctccgt    600

gtggggctgg tgtacctggc aggagtgatt gcagggtccc ttgccagctc catctttgac    660

ccactcagat atcttgtggg agcttcagga ggagtctatg ctctgatggg aggctatttt    720

atgaatgttc tggtgaattt tcaagaaatg attcctgcct ttggaatttt cagactgctg    780

atcatcatcc tgataattgt gttggacatg ggatttgctc tctatagaag gttctttgtt    840

cctgaagatg ggtctccggt gtcttttgca gctcacattg caggtggatt tgctggaatg    900

tccattggct acacggtgtt tagctgcttt gataaagcac tgctgaaaga tccaaggttt    960

tggatagcaa ttgctgcata tttagcttgt gtcttatttg ctgtgttttt caacattttc   1020

ctatctccag caaactgacc tgcccctatt gtaagtcaat taataaaaag agccatctgg   1080

aggaaataaa aaaaaagga agactctatg aagaaacaga gaagtctcag aaaaggctaa   1140

caattttata tagaggacaa aacagcatta aactcatcag ttgcaaagat tgcctataaa   1200
```

aggaccttag gatttaagga aggggcttct taatgtagaa agggaa   1246

<210>   79
<211>   704
<212>   DNA
<213>   human

<220>
<221>   misc_feature
<222>   (23)..(23)
<223>   N EQUALS ANY KIND BASE

<400>   79
tttttttttt tttttttcag tantcagaat aatatatttt acttcttata atgtaaaaaa   60

tataatcgtt tgagtggttt tcagcatgat ctgttaattt tgaatacaga gaatgaacaa   120

agcaggtaaa tatatgtata tgctgaataa tgtaattcca tatacaattc acagttagat   180

gcacttaatt gtggaaaata aaggaagaca ataacatcaa gatctttttc caaaacacgg   240

taaaaataac gttcacatgc attaaacatt tcaagccatc tcagtatatg tctttcttga   300

gtaagtagtg aaccaatgga ccagtggtta ttgttggaga aaacaattag gcaactcatc   360

aatgcgctat ttatacaatc ttagtgacta tttaccactt cacctaagta gactttccca   420

ctcatttgaa gctattgcta tctataaata aatggcaaca ggaaatgttt cacaagggcc   480

tttgatttcc aaaactctca aattccacag caaagactca atttaaggca attatttatg   540

cactgaatat ttgaatgaag atgtattatt ttccttaagt gaaaaaagct gatactattt   600

tgtaatgata aaatttgtat accatagtag aaaatgattt gcaattatgt gttaggactt   660

ttcatattcc atattgaaac atagtgattc tgtagctggg atca   704

<210>   80
<211>   1605
<212>   DNA
<213>   human

<400>   80
atgggctgtg tgcaatgtaa ggataaagaa gcaacaaaac tgacggagga gagggacggc   60

agcctgaacc agagctctgg gtaccgctat ggcacagacc ccaccccctca gcactacccc   120

agcttcggtg tgacctccat ccccaactac aacaacttcc acgcagccgg gggccaagga   180

ctcaccgtct ttggaggtgt gaactcttcg tctcatacgg ggaccttgcg tacgagagga   240

ggaacaggag tgacactctt tgtggccctt tatgactatg aagcacggac agaagatgac   300

ctgagttttc acaaaggaga aaaatttcaa atattgaaca gctcggaagg agattggtgg   360

gaagcccgct ccttgacaac tggagagaca ggttacattc ccagcaatta tgtggctcca   420

gttgactcta tccaggcaga agagtggtac tttggaaaac ttggccgaaa agatgctgag   480

```
cgacagctat tgtcctttgg aaacccaaga ggtacctttc ttatccgcga gagtgaaacc    540

accaaaggtg cctattcact ttctatccgt gattgggatg atatgaaagg agaccatgtc    600

aaacattata aaattcgcaa acttgacaat ggtggatact acattaccac ccgggcccag    660

tttgaaacac ttcagcagct tgtacaacat tactcagaga aagctgacgg tttgtgtttt    720

aacttaactg tgattgcatc gagttgtacc ccacaaactt ctggattggc taaagatgct    780

tgggaagttg cacgtcgttc gttgtgtctg gagaagaagc tgggtcaggg gtgtttcgct    840

gaagtgtggc ttggtacctg gaatggaaac acaaaagtag ccataaagac tcttaaacca    900

ggcacaatgt cccccgaatc attccttgag gaagcgcaga tcatgaagaa gctgaagcac    960

gacaagctgg tccagctcta tgcagtggtg tctgaggagc ccatctacat cgtcaccgag   1020

tatatgaaca aaggaagttt actggatttc ttaaaagatg gagaaggaag agctctgaaa   1080

ttaccaaatc ttgtggacat ggcagcacag gtggctgcag gaatggctta catcgagcgc   1140

atgaattata tccatagaga tctgcgatca gcaaacattc tagtggggaa tggactcata   1200

tgcaagattg ctgacttcgg attggcccga ttgatagaag acaatgagta cacagcaaga   1260

caaggtgcaa agttccccat caagtggacg gcccccgagc gagccctgta cgggaggttc   1320

acaatcaagt ctgacgtgtg gtcttttgga atcttactca cagagctggt caccaaagga   1380

agagtgccat acccaggcat gaacaaccgg gaggtgctgg agcaggtgga gcgaggctac   1440

aggatgccct gcccgcagga ctgccccatc tctctgcatg agctcatgat ccactgctgg   1500

aaaaaggacc ctgaagaacg ccccactttt gagtacttgc agagcttcct ggaagactac   1560

tttaccgcga cagagcccca gtaccaacct ggtgaaaacc tgtaa               1605
```

```
<210> 81
<211> 1717
<212> DNA
<213> human

<400> 81
ccggggacgg ctgctggagc ggcgcccgcc gcggctcagc gcattcccgc tctccgcttc     60

cctctccgct gcgtccccgc gcgaagatgg caaccgaggg gctgcacgag aacgagacgc    120

tggcgtcgct gaagagcgag gccgagagcc tcaagggcaa gctggaggag gagcgagcca    180

agctgcacga tgtggagctg caccaggtgg cggagcgggt ggaggccctg ggcagtttg    240

tcatgaagac cagaaggacc ctcaaaggcc acgggaacaa agtcctgtgc atggactggt    300

gcaaagataa gaggaggatc gtgagctcgt cacaggatgg gaaggtgatc gtgtgggatt    360

ccttcaccac aaacaaggag cacgcggtca ccatgccctg cacgtgggtg atggcatgtg    420

cttatgcccc atcgggatgt gccattgctt gtggtggttt ggataataag tgttctgtgt    480

accccttgac gtttgacaaa aatgaaaaca tggctgccaa aaagaagtct gttgctatgc    540
```

```
acaccaacta cctgtcggcc tgcagcttca ccaactctga catgcagatc ctgacagcga    600

gcggcgatgg cacatgtgcc ctgtgggacg tggagagcgg gcagctgctg cagagcttcc    660

acggacatgg ggctgacgtc ctctgcttgg acctggcccc ctcagaaact ggaaacacct    720

tcgtgtctgg gggatgtgac aagaaagcca tggtgtggga catgcgctcc ggccagtgcg    780

tgcaggcctt tgaaacacat gaatctgaca tcaacagtgt ccggtactac cccagtggag    840

atgcctttgc ttcagggtca gatgacgcta cgtgtcgcct ctatgacctg cgggcagata    900

gggaggttgc catctattcc aaagaaagca tcatatttgg agcatccagc gtggacttct    960

ccctcagtgg tcgcctgctg tttgctggat acaatgatta cactatcaac gtctgggatg   1020

ttctcaaagg gtcccgggtc tccatcctgt ttggacatga aaaccgcgtt agcactctac   1080

gagtttcccc cgatgggact gctttctgct ctggatcatg ggatcatacc ctcagagtct   1140

gggcctaatc atcttctgac agtgcactca tgtatacctg agaatttgaa atcttcacat   1200

gtaaatagat attacttcta gaggagctta gagtttattg cagtgtagct tagggggagca   1260

acccatggct cacaggtcac taagcgtctc caatatgact attaaaactg tcacctctgg   1320

aaatacacta gtgtgagcct tcagcactgc gagaatacct tcaagtacag tattttttctt   1380

ttggaacact ttttaaaatg tatctgtttt taaggttatt ctaaattata gtagcctcaa   1440

ctcattctgt caccagtaga attcagcagt taatatattc catattattt ctttgaatca   1500

attcattttc agagcacttt aaagtctgat atttctcgat gtgcactgtg atgcctggaa   1560

ccttcctctg gaagtgctga ttttatggac tgaggactgg tgactggtct gtgatagaag   1620

caaattccaa ttccaaatgt aattagacaa aaatcatttt tttagaatgt gtttttattg   1680

taaaagtatc tttttcagca aaaaaaaaaa aaaaaaa                             1717
```

<210> 82
<211> 691
<212> DNA
<213> human

<220>
<221> misc_feature
<222> (281)..(281)
<223> N EQUALS ANY KIND BASE

<220>
<221> misc_feature
<222> (345)..(345)
<223> N EQUALS ANY KIND BASE

<220>
<221> misc_feature
<222> (358)..(358)
<223> N EQUALS ANY KIND BASE

```
<220>
<221>  misc_feature
<222>  (443)..(443)
<223>  N EQUALS ANY KIND BASE


<220>
<221>  misc_feature
<222>  (478)..(478)
<223>  N EQUALS ANY KIND BASE


<400>  82
tttttttttt tttttagaac cttagcactt taatagaatt agagactttg gaatttcagg      60

tccttagaac caaagactca cagcatcttt gaaacctaga acctttgaat ctagactctt     120

taaaccttgg actctagagt cttggaatgt taacacctgg gagggcttca gatattgcaa     180

tccaacccct tccttttaca gatggtgatg ctactgcttt caaggtgatg ctactgcaca     240

gagaagggga gggacctgtc tgggatggag gtgggatagg ntagagacag ggctgcaagt     300

ggggataagg cgtggtggga aagtgggaag ggggagtttc cccantggca gtgcttanct     360

tggatcctga gagggagtac caggtggagg gttgtctcag gcaccatcct cctgccctgg     420

ggctgctggg gagcccctat cancaggctg agcggggcta ggggttgtgg aagggcanag     480

gacatagcgt tcagcaggat ggacctcaac cgcagtgagg cagctacagg aatccttagg     540

gtctggctgg gtttggggggg tcagctcctt cttgagcttc caggggggtca aggtaacctc     600

caccttattc atggtgacat agagggattc gtcggcttct gggcagggaa gcagggcttt     660

agtggtgtct tcaaaacttc cccgagctct g                                   691


<210>  83
<211>  1284
<212>  DNA
<213>  human

<400>  83
ggcctgtaca ttttcaagga attcttgaga ggttcttgga gagattctgg gagccaaaca      60

ctccattggg atcctagctg ttttagagaa caacttgtaa tggagccttc atctcttgag     120

ctgccggctg acacagtgca gcgcattgcg gctgaactca aatgccaccc aacggatgag     180

agggtggctc tccacctaga tgaggaagat aagctgaggc acttcaggga gtgcttttat     240

attcccaaaa tacaggatct gcctccagtt gatttatcat tagtgaataa agatgaaaat     300

gccatctatt tcttgggaaa ttctcttggc cttcaaccaa aaatggttaa aacatatctt     360

gaagaagaac tagataagtg ggccaaaata gcagcctatg gtcatgaagt ggggaagcgt     420

ccttggatta caggagatga gagtattgta ggccttatga aggacattgt aggagccaat     480

gagaaagaaa tagccctaat gaatgctttg actgtaaatt tacatcttct aatgttatca     540
```

```
tttttttaagc ctacgccaaa acgatataaa attcttctag aagccaaagc cttcccttct      600

gatcattatg ctattgagtc acaactacaa cttcacggac ttaacattga agaaagtatg      660

cggatgataa agccaagaga gggggaagaa accttaagaa tagaggatat ccttgaagta      720

attgagaagg aaggagactc aattgcagtg atcctgttca gtggggtgca tttttacact      780

ggacagcact ttaatattcc tgccatcaca aaagctggac aagcgaaggg ttgttatgtt      840

ggctttgatc tagcacatgc agttggaaat gttgaactct acttacatga ctggggagtt      900

gattttgcct gctggtgttc ctacaagtat ttaaatgcag gagcaggagg aattgctggt      960

gccttcattc atgaaaagca tgcccatacg attaaacctg cgagatcgga gttctttaat     1020

taggaatgga atgcaacaga tttggacaag tcaaggacaa gagctttaga gagaccaaag     1080

agtttttcac tgttaaagtg tccagtatgt agccgagaac catatggaga acatcaaata     1140

cagtggaaca aatgtaactg ctattgatgt cacactttgt gaagtagtct ttgttgctta     1200

aaaagggtga catctagtgg ctaaacatgt tatttcaaat aaataatatc gaaataaaaa     1260

aaaaaaaaaa aaaaaaaaaa aaaa                                            1284
```

<210> 84
<211> 566
<212> DNA
<213> human

<400> 84
```
ttttgggatg cttcactttc tttattgccc atccaggggga cagccaagcc agctccatct       60

gcattctggc tgcagcgtgt acattagggg actcaggggc cacagtgtgg gaccgtgcac      120

actggcaagg cactggcgga tgctggcagg ccagtggaca tggatagatg agaatgacaa      180

ctcacagatg tcctagcttc cgctggccca gctgccagcc actggccatc acccttttgc      240

ccagcatgtg tgcattgtca cccaaaacat cttgaaactt gccattagtg aggcattcaa      300

caaagaagta agctaagtga gtaggaaaca gtgtttcctg gaatataccg cactctgcct      360

gaaataggaa aactatgttt gccgggaagc agcagcagca ggaaagaagt tataccaaaa      420

acgacttgta caccacagac attataaccc tttcctcaaa gaaacagtca tgttctgttg      480

ggtattatgg acaggtctct ggaaatttat ctaataaaga ccaacaaact tccccagcag      540

tgcctctgag taccgtgtga attctg                                          566
```

<210> 85
<211> 813
<212> DNA
<213> human

<220>
<221> misc_feature
<222> (688)..(688)
<223> N EQUALS ANY KIND BASE

<400> 85

```
tttttttttt tttttttttt tttttttttt ttaaacaaac aaaaaagaag tttactaaat      60
ttaaacactg acatcctggg aagatgccag tctttacagg cgtttgtaaa agtaaactgg     120
ggggagtatg ttacactaat acaaagtttt acaaatgaat acaagtgaaa tatttaaatt     180
acaatgaaat agaggaagat tggggctttg tcctgggttg gttttttttag cagtcatatt     240
gctgttgggg agagcagcaa aagccacata tgcctccaag cactccattt attacttgaa     300
taagacacaa gatgaattca attccaccaa gagccaagag gatagaaaac agagatacat     360
tccattccac aatgtgcttg ggttcagtgc actcggacca tgtggaggta tccaaaaggg     420
tcttgccctt ggggcttgga aaaggggtat ttccactggc cgagggaatc aagacatagt     480
ggtccttctg ctaagccaag ggctgccaca atgacacagt agccagatcc tgcaattcca     540
atgagagcag ccaatacaga agaaagcatc gcacatcgtt tgccacagtt ttcatggcca     600
cagcagccac agcagtcatc ctgttccagc ccaatgaaga caaatgctgg caggagcatc     660
agcaggccac cttctacgat gccagaanaa gaacacacga aagcgggttg aggggttttg     720
ggaggcattc tttgtttccc ccttggggaa ataaaagcaa attttaaccc gggatgcccc     780
aggaggcggg ccccaaccaa aaaaatgtcg gat      813
```

```
<210>  86
<211>  2328
<212>  DNA
<213>  human
```

<400> 86

```
gccagccgag cggccagcca gtgcgggggct ggccatgtaa ggcccacagg cggtcctgcc      60
cgcccggtgc cctgcggaga gcctcgtgca gccctgggca ccgcccctgc cctgccctga     120
ccccttggcc ttgaaatgct gtcatcggag gagccgtccc gctcgggaca aggccagcat     180
ggacaaagct agagctgggg caagcaagga gccttcctgt cctcgaggcc gtgggaagag     240
aagcacgccc aggggggccac tcctgagagc ctctctgtcc accaggcctc tgcagagggg     300
tcaccatggc tctggcccga ggcagccggc agctgggggc cctggtgtgg ggcgcctgcc     360
tgtgcgtgct ggtgcacggg cagcaggcgc agcccgggca gggctcggac cccgcccgct     420
ggcggcagct gatccagtgg gagaacaacg ggcaggtgta cagcttgctc aactcgggct     480
cagagtacgt gccggccgga cctcagcgct ccgagagtag ctcccgggtg ctgctggccg     540
gcgcgcccca ggcccagcag cggcgcagcc acgggagccc ccggcgtcgg caggcgccgt     600
ccctgcccct gccggggcgc gtgggctcgg acaccgtgcg cggccaggcg cggcacccat     660
tcggctttgg ccaggtgccc gacaactggc gcgaggtggc cgtcggggac agcacgggca     720
tggccctggc ccgcacctcc gtctcccagc aacggcacgg gggctccgcc tcctcggtct     780
```

```
cggcttcggc cttcgccagc acctaccgcc agcagccctc ctacccgcag cagttcccct      840

acccgcaggc gcccttcgtc agccagtacg agaactacga ccccgcgtcg cggacctacg      900

accagggttt cgtgtactac cggcccgcgg gcggcggcgt gggcgcgggg gcggcggccg      960

tggcctcggc gggggtcatc tacccctacc agccccgggc gcgctacgag gagtacggcg     1020

gcggcgaaga gctgcccgag tacccgcctc agggcttcta cccggccccc gagaggccct     1080

acgtgccgcc gccgccgccg ccccccgacg gcctggaccg ccgctactcg cacagtctgt     1140

acagcgaggg caccccggc ttcgagcagg cctaccctga ccccggtccc gaggcggcgc      1200

aggcccatgg cggagaccca cgcctgggct ggtacccgcc ctacgccaac ccgccgcccg     1260

aggcgtacgg gccgccgcgc gcgctggagc cgccctacct gccggtgcgc agctccgaca     1320

cgcccccgcc gggtggggag cggaacggcg cgcagcaggg ccgcctcagc gtaggcagcg     1380

tgtaccggcc caaccagaac ggccgcggtc tccctgactt ggtcccagac cccaactatg     1440

tgcaagcatc cacttatgtg cagagagccc acctgtactc cctgcgctgt gctgcggagg     1500

agaagtgtct ggccagcaca gcctatgccc ctgaggccac cgactacgat gtgcgggtgc     1560

tactgcgctt cccccagcgc gtgaagaacc agggcacagc agacttcctc cccaaccggc     1620

cacggcacac ctgggagtgg cacagctgcc accagcatta ccacagcatg gacgagttca     1680

gccactacga cctactggat gcagccacag gcaagaaggt ggccgagggc cacaaggcca     1740

gtttctgcct ggaggacagc acctgtgact tcggcaacct caagcgctat gcatgcacct     1800

ctcatacca gggcctgagc ccaggctgct atgacacta caatgcggac atcgactgcc      1860

agtggatcga cataaccgac gtgcagcctg ggaactacat cctcaaggtg cacgtgaacc     1920

caaagtatat tgttttggag tctgacttca ccaacaacgt ggtgagatgc aacattcact     1980

acacaggtcg ctacgtttct gcaacaaact gcaaaattgt ccaatcctga tctccgggag     2040

ggacagatgg ccaatctctc cccttccaaa gcaggccctg ctccccgggc agcctcccgc     2100

cgaggggccc agcccccaac ccacaggcag ggaggggcat ccctccctgc cggcctcagg     2160

gagcgaacgt ggatgaaaac cacagggatt ccggatgcca gaccccattt tatacttcac     2220

ttttctctac agtgttgttt tgttgttgtt ggtttttatt ttttatactt tggccatacc     2280

acagagctag attgcccagg tctgggctga ataaaacaag gtttttct             2328
```

<210> 87
<211> 544
<212> DNA
<213> human

<400> 87

```
aggctttttag aaaatttatt atgaattccg agaagtctgc tcatcatata cctcccccag      60

ccccaaataa aacaaacaac atgtttgtac ataaagcctg gatttacttg gtacaaaatt     120
```

```
tgagtctttg aaaaaaatag ttaatggaaa atctcaataa aaattcattt tgaaagtaac      180

cagtactgtt cagaaataag gaagtcatgt tacttgagaa gtcacacagt tttattacag      240

aactatgtgt atatattttg ggtttaaaac ttgccaatag ctgtttgaaa ggatagctca      300

taatttattc aaatagatat tttattaatc aaatgttttt ggtttatcaa cataaccaaa      360

tgtataaaaa atgtttttaa atacaagaca taactataaa gtcatgaggc tgattgacct      420

tttaaactaa cataataaaa tctatatggt caaaatgagt ggtgatgctt taaggtaatg      480

attatgcgtc ccatctaagg atgctgcaat ggcctagggc agttttgaaa tgtctctttg      540

caac                                                                   544
```

```
<210>   88
<211>   5189
<212>   DNA
<213>   human

<400>   88
cttgcgaggt gagcatttcc aaggctgtgt gctcgtgggg tggggggaca cacgatgacc       60

ttctcctcct caggaagacc taagagggaa gagcaaaccc cagcgagatc cccctgtgc       120

tgatgatttt cagggacttg ttggcaactc agcgagggtt gccatagctt ttttatgtag      180

ggtgaccaga accggctgaa actggtttga ggcagatcag ctcctgaaca caatgcagtc      240

actgagctac tacagtagga tagcagcttc ctcccttcat ggcagccaaa agcagaggag      300

cttgcaggaa ggtaccatcc ctacacagta tgtgaatgca cacttagaca ccacacagca      360

ctggtacgtg actaatggag ccctaaaaga ttctgggtag agaagatgga aaaaaaggtg      420

caggtttgca gggtctgaga ttacttgggc ttttcctgcc tttttctttt gcttaaggga      480

tggacaagga gctgagattt atgacccctta ttagagaaaa aaatgtgcct tgctagggtg .    540

gggacacttg gttgatgcag tctctctctc tctttctcgg tgtttataac aaaacaaaac      600

caaaatgaac tgaggggttt gtaatggtag tttgtttgtt gctggagaat gctactttgc      660

atgctttttt tctcttgcag ggtatgttct gtcttgtgct ttttctttta gaagctacta      720

aagggtgttg gggatgcttc tgactattat gaaggccaaa aggcctgttg actggggctg      780

cttttaaccc tttcctattt gctgagaatg cagccgtgtg acagtaactg aacattggtc      840

taaagtcttt ccaaaaggtc aaggttcaca agaacatctg ctcaaattaa tgaccatggg      900

ggatatgaag accccagact ttgatgacct cctggcagca tttgacatcc agatatggt       960

cgatcctaaa gcagctattg agtctggaca cgatgaccat gaaagccaca tgaagcagaa     1020

tgctcacgga gaggatgact cccacgcacc atcatcttct gatgtgggtg tcagcgttat     1080

cgtcaagaat gttcggaaca ttgactcttc cgagggcggg gagaaagacg ccacaaccc      1140

cactggcaat ggcttacata atgggtttct cacagcatcc tcccttgaca gttacagtaa     1200
```
Page 111

```
agatggagca aagtccttga aaggagatgt gcctgcctct gaggtgacac tgaaagactc   1260

gacattcagc cagtttagcc cgatctccag tgctgaagag tttgatgacg acgagaagat   1320

tgaggtggat gaccccctg acaaggagga catgcgatca agcttcaggt cgaatgtgtt   1380

gacggggtcg gctccccagc aggactacga taagctgaag gcactcggag gggaaaactc   1440

cagcaaaact ggactctcta cgtcaggcaa tgtggagaaa aacaaagctg ttaagagaga   1500

aacagaagcc agttctataa acctgagtgt ttatgaacct tttaaagtca gaaaagcaga   1560

ggataaattg aaggaaagct ctgacaaggt gctggaaaac agagtcctag atgggaagct   1620

gagctccgag aagaatgaca ccagcctccc cagcgttgcg ccatcaaaga caaagtcgtc   1680

ctccaagctc tcgtcctgca tcgctgccat cgcggctctc agcgctaaaa aggcggcttc   1740

agactcctgc aaagaaccag tggccaattc gagggaatcc tccccgttac caaaagaagt   1800

aaatgacagt ccgagagccg ctgacaagtc tcctgaatcc cagaatctca tcgacgggac   1860

caaaaaacca tccctgaagc aaccggatag tcccagaagc atctcaagtg agaacagcag   1920

caaaggatcc ccgtcctctc ccgcagggtc cacaccagca atccccaaag tccgcataaa   1980

aaccattaag acatcttctg gggaaatcaa gagaacagtg accagggtat tgccagaagt   2040

ggatcttgac tctggaaaga aaccttccga gcagacagcg tccgtgatgg cctctgtgac   2100

atcccttctg tcgtctccag catcagccgc cgtcctttcc tctcccccca gggcgcctct   2160

ccagtctgcg gtcgtgacca atgcagtttc ccctgcagag ctcacccca aacaggtcac   2220

aatcaagcct gtggctactg ctttcctccc agtgtctgct gtgaagacgg caggatccca   2280

agtcattaat ttgaagctcg ctaacaacac cacggtgaaa gccacggtca tatctgctgc   2340

ctctgtccag agtgccagca gcgccatcat taaagctgcc aacgccatcc agcagcaaac   2400

tgtcgtggtg ccggcatcca gcctggccaa tgccaaactc gtgccaaaga ctgtgcacct   2460

tgccaacctt aacctttttgc ctcagggtgc ccaggccacc tctgaactcc gccaagtgct   2520

aaccaaacct cagcaacaaa taaagcaggc aataatcaat gcagcagcct cgcaaccccc   2580

caaaaaggtg tctcgagtcc aggtggtgtc gtccttgcag agttctgtgg tggaagcttt   2640

caacaaggtg ctgagcagtg tcaatccagt ccctgtttac atcccaaacc tcagtcctcc   2700

cgccaatgca gggatcacgt taccgacgcg tgggtacaag tgcttggagt gtgggggactc   2760

ctttgcactt gaaaagagtc tgacccagca ctacgacaga cggagcgtgc gcatcgaagt   2820

aacgtgcaac cattgtacaa agaacctcgt tttttacaac aaatgcagcc tcctttccca   2880

tgcccgtggg cataaggaga aaggggtggt aatgcaatgc tcccacttaa ttttaaagcc   2940

agtcccagca gatcaaatga tagtttctcc gtcaagcaat acttccactt caacttccac   3000

tcttcagagc cctgtgggag ctggcacaca cactgtcaca aaaattcagt ctggcataac   3060
```

Page 112

```
tgggacagtc atatcggctc cttcaagcac tcccatcacc ccagccatgc ccctagatga   3120

agacccctcc aaactgtgta gacatagtct aaaatgtttg gagtgtaatg aagtcttcca   3180

ggacgagaca tcactggcta cacatttcca gcaggctgca gatacgagtg gacaaaagac   3240

ttgcactatc tgccagatgc tgcttcctaa ccagtgcagt tatgcatcac accagagaat   3300

ccatcagcac aaatctccct acacctgccc tgagtgtggg gccatctgca ggtcggtgca   3360

cttccagacc cacgtcacca agaactgtct gcactacacg aggagagttg gttttcgatg   3420

tgtgcattgc aatgttgtgt actctgatgt ggctgctctg aagtctcaca ttcaaggttc   3480

tcactgtgaa gtcttctaca agtgtcctat ttgtccaatg gcgtttaagt ctgccccaag   3540

cacacattcc cacgcctaca cacagcatcc tggcatcaag ataggagaac caaaaataat   3600

atataagtgt tccatgtgcg acactgtgtt caccctgcaa accttgctgt atcgccactt   3660

tgaccaacac attgaaaacc agaaggtgtc tgttttcaag tgtccagact gttctctttt   3720

atatgcacag aagcaactta tgatggacca tatcaagtct atgcatggaa cattgaaaag   3780

tattgaaggg cctccaaact tgggtataaa cttgcctttg agcattaagc ctgcaactca   3840

aaaattcagca aatcagaaca aagaggacac caaatccatg aatgggaaag agaaattgga   3900

aaagaaatct ccatctcctg tgaaaaaatc aatggaaacc aagaaagtgg ccagtcctgg   3960

gtggacgtgt tgggagtgtg actgcctgtt catgcagaga gatgtgtaca tatcccacgt   4020

gaggaaggag cacgggaagc aaatgaagaa acacccctgc cgccagtgtg acaagtcttt   4080

cagctcgtcc cacagcctgt gccggcacaa ccggatcaag cacaaaggca tcaggaaagt   4140

gtacgcctgc tcgcactgcc cagactccag acgtaccttt accaaacgtt tgatgctgga   4200

gaagcacgtc cagctgatgc atggcatcaa ggaccctgac ctgaaagaaa tgacagatgc   4260

caccaatgag gaggaaacag aaataaaaga agacactaag gtccccagtc ccaagcggaa   4320

gttggaagaa ccagttctgg agttcaggcc tccccgagga gcaatcactc aaccactgaa   4380

aaagctgaaa atcaatgttt ttaaggttca caagtgtgcc gtgtgtggct tcaccaccga   4440

aaacctgctg caattccacg aacacatccc tcagcacaaa tcggatggtt cttcctacca   4500

gtgccgggag tgtggcctct gctacacgtc tcacgtctct ctgtccaggc acctcttcat   4560

cgtacacaag ttaaaggaac ctcagccagt gtccaagcaa aatggggctg gggaagataa   4620

ccaacaggag aacaaaccca gccacgagga tgaatcccct gatggcgccg tgtcagacag   4680

aaagtgcaaa gtgtgcgcaa aaacttttga aactgaagct gccttaaata ctcacatgcg   4740

gacacacggc atggccttca tcaaatccaa aaggatgagc tcagccgaga aatagccaca   4800

gatgctccat gaggaaaatc cctgtccaca ttggaataaa aaagacattt ttgttacaaa   4860

gtttgcagta taatagagtt aacagtactg tctaggctgt tgcaatatat tctctttcaa   4920

tgtaccttcc ttcacctcgt cgtatatatc ctcgataagt attaaaacag tatttgagtt   4980
```

```
taaaagagtt tgtatatatt taaatgaata acttttttata ctctttgtta catgtttgta   5040

tcagtattta gtggaaaacc atttgagttg ttttgggtta gaatttttct ttttgtactg   5100

tttcttttaaa acagagttct tagtaacagg ggcagttcct gaattcaaat aaaccatttt   5160

gtatgtttgg aaaaaaaaaa aaaaaaaaa                                      5189
```

```
<210>  89
<211>  1061
<212>  DNA
<213>  human

<400>  89
ctctgtttttc tcaaagctga agtcggctag ggtttgcaaag ctgtgggctg agcactcagg   60

caatcacact ctcagaaact gcggcggctc tggactgcag cctcccaagg ctccatgcca   120

gacaaagcat gcgtgtcaca cttgctacaa tagcctggat ggtttctttt gtctccaatt   180

attcacacac agcaaatatt ttgccagata tcgaaaatga agatttcatc aaagactgcg   240

ttcgaatcca taacaagttc cgatcagagg tgaaaccaac agccagtgat atgctataca   300

tgacttggga cccagcacta gcccaaattg caaaagcatg ggccagcaat tgccagtttt   360

cacataatac acggctgaag ccaccccaca agctgcaccc aaacttcact tcactgggag   420

agaacatctg gactgggtct gtgcccattt tttctgtgtc ttccgccatc acaaactggt   480

atgacgaaat ccaggactat gacttcaaga ctcggatatg caaaaaagtc tgtggccact   540

acactcaggt tgtttgggca gatagttaca aagttggctg cgcagttcaa ttttgcccta   600

aagtttctgg ctttgacgct ctttccaatg gagcacattt tatatgcaac tacggaccag   660

gagggaatta cccaacttgg ccatataaga gaggagccac ctgcagtgcc tgccccaata   720

atgacaagtg tttggacaat ctctgtgtta accgacagcg agaccaagtg aaacgttact   780

actctgttgt atatccaggc tggcccatat atccacgtaa cagatacact tctctctttc   840

tcattgttaa ttcagtaatt ctaatactgt ctgttataat taccattttg gtacagctca   900

agtaccctaa tttagttctt ttggactaat acaattcagg aaagaaaaaa cccaaaaacc   960

aacctcattc acatatggct ttttttttaac caataacaat taggtgtact tctattttaa   1020

aacatttcag aaaaaaatat atgttatagc aatactctta c                       1061
```

```
<210>  90
<211>  1453
<212>  DNA
<213>  human

<400>  90
agcgcgagtg ccagagccca gccggcgcgg agcgggagcg gtgcaggctg aggtctccga   60

gcggctcgcc atggctggcc cgcagcagca gcccccttac ctgcacctgg ccgagctgac   120
```

```
ggcgtcccag ttcctggaaa tatggaagca ctttgacgca gacggaaatg ggtatattga    180

aggtaaagag ctagaaaact ttttccaaga gctggagaag gcaaggaaag gctctggcat    240

gatgtcaaag agtgacaact ttggagaaaa gatgaaggag ttcatgcaga agtatgataa    300

aaactcagat gggaaaatcg agatggcaga gctggcgcag atcctgccaa ccgaagagaa    360

cttccttctg tgcttcaggc agcacgtggg ctccagcgcc gagtttatgg aggcttggcg    420

gaagtacgac acagacagga gtggctacat cgaagccaat gagctcaagg gattcctgtc    480

agacctgctg aagaaggcga accggccgta cgatgagccc aagtccagg aatacaccca    540

aaccatacta cggatgtttg acttgaacgg ggatggcaaa ttgggcctct cagagatgtc    600

ccgactcctg cctgtccagg aaaacttcct gcttaaattt cagggcatga agctgacctc    660

agaggagttt aacgcgatct tcacatttta cgacaaggat agaagcggct acattgacga    720

gcatgagctg gatgcccttt tgaaggatct gtacgagaaa aacaaaaagg aaatcaatat    780

tcaacagctc accaactaca gaaagagcgt catgtccttg gcagaggcag ggaagctcta    840

ccgcaaggac ctggagattg tgctctgcag cgagcccccc atgtaaagtg gggacggggg    900

ctgcttctcc acctccccca aaccctgctt ctgctgccct gatgcgtcta cccagactca    960

gagaccgtga gcgccccgcc cccacccta cagcctgcac acacctgcct gcagagcagg   1020

aaacgagaga tagaggatgg gcagctgggg ggctgtcctg agcccctgc acccacccct   1080

gcccaggcag tctttgctca gtggatcaca cacatggaag gtgatggggg catgggtgga   1140

gggtccctaa ttctcttcgc tgtgatgcat gagctccctc gctgtatgat ttaggcttct   1200

atgtccaaca gagtggactc ttccctctcg ctccctctg ccggtccccc atgccaccac   1260

ccaccccaaa cttccaggtt ccatccacca ccttgccaat ggtgtagctg tcctctcaga   1320

actcctgtgt gtggaaggca cccgcccttt ccttgccttc tttactcggc gtgctccttt   1380

tctctttggg tttcttgttt accaaagaag agtttacaga caataaaatg gaaaggtcct   1440

gctgtggaaa ctt                                                      1453
```

```
<210>    91
<211>    2223
<212>    DNA
<213>    human

<400>    91
tcagtgtgtg cggaacgcaa gcagccgaga gcggagaggc gccgctgtag ttaactcctc     60

cctgcccgcc gcgccgaccc tccccaggaa cccccaggga gccagcatga agcgagctca    120

ccccgagtac agctcctcgg acagcgagct ggacgagacc atcgaggtgg agaaggagag    180

tgcggacgag aatggaaact tgagttcggc tctaggttcc atgtccccaa ctacatcttc    240

ccagattttg gccagaaaaa gacggagagg aataattgag aagcgccgac gagaccggat    300
```

```
caataacagt ttgtctgagc tgagaaggct ggtacccagt gcttttgaga agcagggatc      360

tgctaagcta gaaaaagccg agatcctgca gatgaccgtg gatcacctga aaatgctgca      420

tacggcagga gggaaaggtt actttgacgc gcacgccctt gctatggact atcggagttt     ·480

gggatttcgg gaatgcctgg cagaagttgc gcgttatctg agcatcattg aaggactaga      540

tgcctctgac ccgcttcgag ttcgactggt ttcgcatctc aacaactacg cttcccagcg      600

ggaagccgcg agcggcgccc acgcgggcct cggacacatt ccctggggga ccgtcttcgg      660

acatcacccg cacatcgcgc acccgctgtt gctgccccag aacggccacg ggaacgcggg      720

caccacggcc tcacccacgg aaccgcacca ccagggcagg ctgggctcgg cacatccgga      780

ggcgcctgct ttgcgagcgc cccctagcgg cagcttcgga ccggtgctcc ctgtggtcac      840

ctccgcctcc aaactgtcgc tgcctctgct ctcctcagtg gcctccctgt cggccttccc      900

cttctctttc ggctccttcc acttactgtc tcccaatgca ctgagccctt cagcacccac      960

gcaggctgca aaccttggca agccctatag accttggggg acggagatcg gagcttttta     1020

aagaactgat gtagaatgag ggagggaaa gtttaaaatc ccagctgggc tggactgttg     1080

ccaacatcac cttaaagtcg tcagtaaaag taaaaaggaa aaaggtacac tttcagataa     1140

tttttttttt aaagactaaa ggtttgttgg tttactttta tcttttttaa tgttttttc     1200

atcatgtcat gtattagcag tttttaaaaa ctagttgtta aattttgttc aagacattaa     1260

attgaaatag tgagtataag ccaacacttt gtgataggtt tgtactgtgc ctaatttact     1320

ttgtaaacca gaatgattcc gtttttgcct caaaatttgg ggaatcttaa catttaggta     1380

tttttggtct gtttttctcc ttgtatagtt atggtctgtt tttagaatta attttccaaa     1440

ccactatgct taatgttaac atgattctgt ttgttaatat tttgacagat taaggtgttg     1500

tataaataat attcttttgg ggggaggga actatattga attttatatt tctgagcaaa     1560

gcgttgacaa atcagatgat cagctttatc caagaaagaa gactagtaaa ttgtctgcct     1620

cctatagcag aaaggtgaat gtacaaactg ttggtggcct gaatccatct gaccagctgc     1680

tggtatctgc caggactggc agttctgatt tagttaggag gaccgctgat aggttaggtc     1740

tcatttggag tgttggtgga aaggaaactg aaggtaattg aatagaatac gcctgcattt     1800

accagcccca gcaacacaaa gaatttttaa tcacacggat ctcaaattca caaatgttaa·     1860

catggataag tgatcatggt gtgcgagtgg tcaattgagt agtacagtgg aaactgttaa     1920

atgcataacc taattttcct ǧggactgcca tattttcttt taactggaaa tttttatgtg     1980

agttttcctt ttggtgcatg gaactgtggt tgccaaggta tttaaaaggg ctttcctgcc     2040

tccttctctt tgatttattt aatttgattt gggctataaa atatcatttt tcaggtttat     2100

tcttttagca ggtgtagtta aacgacctcc actgaactgg gtttgacctc tgttgtactg     2160

atgtgttgtg actaaataaa aaagaaagaa caaagtaaaa aaaaaaaaaa aaaaaaaaa      2220
```

aaa   2223

<210> 92
<211> 4712
<212> DNA
<213> human

<400> 92
cccggcggtg gcggcgtctc tggccggcct tggtgcggcg agccgagcga ggcagctctg   60

agccgcgcgg aaatctggca ttttttaaag tttgcgcccc acaaagagga aatattccaa   120

aggtactcag gatgtaaaag gggagatctt cacagatgcc tccgtggatg gcatggcaat   180

ccatccatca atgagaagac catgatttct tttaattttc tgtgtgtttc cacattcccc   240

agtgagaatt cttccacctt tttttgtgcc atgggaaaaa cctgaagggc aggcagagct   300

gctcccgaac ttgtgacctt ctctgaggtt gcagcggctc ttgtagaaca tgactctggg   360

acatcacttc cttttgtttt ctttcggagc tgaaccaaag aatgtgcacc ctctttctct   420

agtgctgtgg tgtctgctta tttttgtatt tgtgctttcc atccatcttc tgtgatcaca   480

aggcattctt aaggttttct agcacgactt gcggacatcc agactcgtgg ggggcccacc   540

catggctcgg taagccagca gcccagggca ctggcactac catgaggcac tgcattaatt   600

gctgcataca gctgttaccc gacggcgcac acaagcagca ggtcaactgc caagggggcc   660

cccatcacgg tcaccaggcg tgccccacgt gcaaaggaga aaacaaaatt ctgtttcgtg   720

tggacagtaa gcagatgaac ttgcttgctg ttctcgaagt gaggactgaa gggaacgaaa   780

actggggtgg gtttttgcgc ttcaaaaagg ggaagcgatg tagcctcgtt tttggactga   840

taataatgac cttggtaatg gcttcttaca tcctttctgg ggcccaccaa gagcttctga   900

tctcatcacc tttccattac ggaggcttcc ccagcaaccc cagcttgatg gacagcgaaa   960

acccaagtga cacaaaggag catcaccacc aatcctctgt aaataatatt tcatacatga   1020

aggactatcc aagcattaaa ttaattatca acagcatcac aactaggatt gagttcacga   1080

ccagacagct cccagactta gaagacctta agaagcagga gttgcatatg ttttcagtca   1140

tccccaacaa attccttcca aacagtaaga gcccctgttg gtacgaggag ttctcggggc   1200

agaacaccac cgacccctac ctcaccaact cctacgtgct ctactccaag cgcttccgct   1260

ccaccttcga cgccctgcgc aaggccttct ggggccacct ggcgcacgcg cacgggaagc   1320

acttccgcct gcgctgcctg ccgcacttct acatcatagg gcagcccaag tgcgggacca   1380

cagacctcta tgaccgcctg cggctgcacc ctgaggtcaa gttctccgcc atcaaggagc   1440

cacactggtg gacccggaag cgctttggaa tcgtccgcct aagagatggg ctgcgagacc   1500

gctatcccgt ggaagattat ctggacctct ttgacctggc cgcacaccag atccatcaag   1560

gactgcaggc cagctctgca aaggagcaga gcaagatgaa tacaatcatt atcggggagg   1620

```
ccagtgcctc cacgatgtgg gataataatg cctggacgtt cttctacgac aacagcacgg    1680

atggcgagcc accgtttctg acgcaggact tcatccacgc ctttcagcca aatgccagac    1740

tgattgtcat gctcagggac cctgtggaga ggttgtactc agactatctc tactttgcaa    1800

gttcgaataa atccgcggac gacttccatg agaaagtgac agaagcactg cagctgtttg    1860

aaaattgcat gcttgattat tcactgcgcg cctgcgtcta caacaacacc ctcaacaacg    1920

ccatgcctgt gaggctccag gttgggctct atgctgtgta ccttctggac tggctcagcg    1980

tttttgacaa gcaacagttt ctcattcttc gcctggaaga tcatgcatcc aacgtcaagt    2040

acaccatgca caaggtcttc cagtttctga acctagggcc cttaagtgag aagcaggagg    2100

ctttgatgac caagagcccc gcatccaatg cacggcgtcc cgaggaccgg aacctggggc    2160

ccatgtggcc catcacacag aagattctgc gggatttcta caggcccttc aacgctaggc    2220

tggcgcaggt cctcgcggat gaggcgtttg cgtggaagac gacgtgagag ctgaattgtt    2280

gctgcacgtg ctgggcccgc caatgccgtc atcatcagga ttttacaaat ctctttgcgg    2340

ggaactgttt cactcatggt atggaaaacc ccaggactct gccactctag gcacacatga    2400

attataacca ttttggaatt ccttcgtga tgttcgagag ctcagcaatg gacccctcac     2460

agagctcctc tatccgaggc cattggagac cccagtttct caagaattca gctctgctct    2520

gagcgtcctg gagcttgggg atgcagccag ctggcctgca ctgggtgtgg agagaacacc    2580

tagggaaggc agcctggccc tgcccgcctc cgccttctgg agagcctctg ggttctgagt    2640

cagcaagcca gaggtcatgc cacaggcctg gctggaactt acacttcacg ttcccttttt    2700

ttccccctag agatggggtc tcgccgtgtt gcacagactg tctgtattca atggctatct    2760

tcacaggtgt gatcatacca cattcacttc tgaaacactc ttgttgcgat cgctaacctc    2820

actgggacag agaaccgcag tctttcgaga atggaggctc ttcatttttt ttttctcctt    2880

tactccaaac tcagccctcc agtttcttca gatgtaaacc ctgttaacgt cactgtttcc    2940

aaaaggaaaa aaataagtca gtttttggca gcaccttcat ctttctgacc tcctcctatt    3000

ctgtccttgt ggacttatgt ttaacataga aaatgaatgc gtttaaaaca aaaccactt    3060

ctgcatttaa ccagtcctgg ctctctctct gctgcctctt catacgtttt ctcaagaact    3120

tcagtttata attggaagag aaatttttgc tgttaatgcc agaatgagca acctcaagga    3180

attgaacact tcttggaaaa tctaggtaat tcaagccctc atcaggttta caagatcatc    3240

agagaaacag aggattttaa tttttagttc tggccggcta caggctccat ttctctgcct    3300

tcccattgga aatagtttat ttccacattc tccactgcgt gtggtcaaag ttcctcaccc    3360

agcaagggac tatagatact cgtgtcccaa ttccaaaaca caatgcacaa gctgaacttg    3420

ggctgaacgt ggcgtgttga gatttggaat gaggtttcta agagccgtgt tcttcatgga    3480
```

Page 118

```
attttccagg ccacttggca gcttggttta ccgatggatg ggctagagat cttgtcgttt   3540

cttggaagtc acagggaaga ttgaagagaa cgcttgagca tccttggcaa cagcccaggt   3600

gggacctgga tgaagctttg cactcaagta ttgtcaaggg aagcttcctg tgaaccaaag   3660

ttctcaggcc aaggtctcgc ccaccaaagc cagaaagtgc aagcacccgt ctacccagct   3720

ctaacttgta tgtgtgagac agaccaggct tcgggggtag gaggatctgc agttgttcag   3780

ccgtctttct gctggtgttg tctttctgcc atcagagaag ggacacacag cccgttcgaa   3840

ggtgtgcaga gggctctgag cgccaggatg gccagggctg tttttgctac tgaaggagcg   3900

tgtgtcctga actcccactt gcagggacag tccccacctt ctctatagcc ggcactggga   3960

gcagccgcca gcagggaaat ctggcctgag cacaaggatg ctttagggag agatcacttc   4020

agtgtgtgtg tatatttatt tgcagtacag tgcgcgcgtg tgtgtgtgtg tacgcgcacg   4080

tgtgggtgag tgcgtcttct gagtgggttc tgttcagttg ctaatgaggc tcctccgctc   4140

tggacacaac cctttatag attaatttct ctgccaatta acttgtcatt ttcagtacat    4200

attttactat tccacaccaa ccataattac aacaagggat ttttcttatg cactcctatg   4260

catgtgaata acatgtggtg taattctgct tcttacagaa gtattactga aggtattatt   4320

tccaatatta tttggtttat tatgcggatc ttttttatat atgcagtccc atcccttctg   4380

tgccactcaa tgccatccag acatggtttt tccctccagg ggcctttctc tccagagggc   4440

acttcggctg cctctgcttc ctctcattcg aggcccggct cttgctgaca gaataggttc   4500

cgttctgggc ggtggttctc gagcctgcca ttcaaaacca aagcaaattg gagcatttct   4560

cacaacatgg tattgaagtt ccttttgtt ctcaaaagtt gtgaccgtgt taaattgtac    4620

tcccttagtc ctgtaaggta tgttaagtga atcgcagtta cgctgtactt ttattaatat   4680

ttaacataat taaagatgga cccataagag tg                                 4712
```

<210> 93
<211> 1398
<212> DNA
<213> human

<400> 93
```
gtgtgaaatc ttcagagaag aatttctctt tagttctttg caagaaggta gagataaaga     60

cacttttca aaaatggcaa tggtatcaga attcctcaag caggcctggt ttattgaaaa    120

tgaagagcag gaatatgttc aaactgtgaa gtcatccaaa ggtggtcccg gatcagcggt    180

gagcccctat cctaccttca atccatcctc ggatgtcgct gccttgcata aggccataat    240

ggttaaaggt gtggatgaag caaccatcat tgacattcta actaagcgaa acaatgcaca    300

gcgtcaacag atcaaagcag catatctcca ggaaacagga aagcccctgg atgaaacact    360

taagaaagcc cttacaggtc accttgagga ggttgtttta gctctgctaa aaactccagc    420
```

```
gcaatttgat gctgatgaac ttcgtgctgc catgaagggc cttggaactg atgaagatac      480

tctaattgag attttggcat caagaactaa caaagaaatc agagacatta acagggtcta      540

cagagaggaa ctgaagagag atctggccaa agacataacc tcagacacat ctggagattt      600

tcggaacgct ttgctttctc ttgctaaggg tgaccgatct gaggactttg gtgtgaatga      660

agacttggct gattcagatg ccagggcctt gtatgaagca ggagaaagga gaaaggggac      720

agacgtaaac gtgttcaata ccatccttac caccagaagc tatccacaac ttcgcagagt      780

gtttcagaaa tacaccaagt acagtaagca tgacatgaac aaagttctgg acctggagtt      840

gaaaggtgac attgagaaat gcctcacagc tatcgtgaag tgcgccacaa gcaaaccagc      900

tttctttgca gagaagcttc atcaagccat gaaaggtgtt ggaactcgcc ataaggcatt      960

gatcaggatt atggtttccc gttctgaaat tgacatgaat gatatcaaag cattctatca     1020

gaagatgtat ggtatctccc tttgccaagc catcctggat gaaaccaaag gagattatga     1080

gaaaatcctg gtggctcttt gtggaggaaa ctaaacattc ccttgatggt ctcaagctat     1140

gatcagaaga cttttaattat atattttcat cctataagct aaataggaa agtttcttca     1200

acaggattac agtgtagcta cctacatgct gaaaaatata gcctttaaat cattttttata     1260

ttataactct gtataataga dataagtcca ttttttaaaa atgttttccc caaaccataa     1320

aaccctatac aagttgttct agtaacaata catgagaaag atgtctatgt agctgaaaat     1380

aaaatgacgt cacaagac                                                  1398
```

<210> 94
<211> 2972
<212> DNA
<213> human

<400> 94
```
gcgcgcggct ccgatgggaa gcatgacccg ggtggcggga caagacttgc ttcccggcca       60

cgcgcgctcg gccggccgtg gggcggggca taggcgtgac gtggtgtcgc gtatcgagtc      120

tccgcccccct tcccgcctcc ccgtatataa gacttcgccg agcactctca ctcgcacaag      180

tggaccgggg tgttgggtgc tagtcggcac cagaggcaag ggtgcgagga ccacggccgg      240

ctcggacgtg tgaccgcgcc tagggggtgg cagcgggcag tgcggggcgg caaggcgacc      300

atggarcttt tgcggactat cacctaccag ccagccgcca gcaccaaaat gtgcgagcag      360

gcgctgggca agggttgcgg aggggactcg aagaagaagc ggccgccgca gccccccgag      420

gaatcgcagc cacctcagtc ccaggcgcaa gtgcccccgg cggcccctca ccaccatcac      480

caccattcgc actcggggcc ggagatctcg cggattatcg tcgaccccac gactgggaag      540

cgctactgcc ggggcaaagt gctgggaaag ggtggctttg caaaatgtta cgagatgaca      600

gatttgacaa ataacaaagt ctacgccgca aaaattattc ctcacagcag agtagctaaa      660
```

```
cctcatcaaa gggaaaagat tgacaaagaa atagagcttc acagaattct tcatcataag    720

catgtagtgc agttttacca ctacttcgag gacaaagaaa acatttacat tctcttggaa    780

tactgcagta gaaggtcaat ggctcatatt ttgaaagcaa gaaaggtgtt gacagagcca    840

gaagttcgat actacctcag gcagattgtg tctggactga aataccttca tgaacaagaa    900

atcttgcaca gagatctcaa actagggaac tttttatta atgaagccat ggaactaaaa    960

gttgggggact tcggtctggc agccaggcta gaacccytgg aacacagaag gagaacgata   1020

tgtggtaccc caaattatct ctctcctgaa gtcctcaaca aacaaggaca tggctgtgaa   1080

tcagacattt gggccctggg ctgtgtaatg tatacaatgt tactagggag gcccccattt   1140

gaaactacaa atctcaaaga aacttatagg tgcataaggg aagcaaggta tacaatgccg   1200

tcctcattgc tggctcctgc caagcactta attgctagta tgttgtccaa aaacccagag   1260

gatcgtccca gtttggatga catcattcga catgactttt ttttgcaggg cttcactccg   1320

gacagactgt cttctagctg ttgtcataca gttccagatt ccacttatc aagcccagct    1380

aagaatttct ttaagaaagc agctgctgct cttttggtg gcaaaaaaga caaagcaaga    1440

tatattgaca cacataatag agtgtctaaa gaagatgaag acatctacaa gcttaggcat   1500

gatttgaaaa agacttcaat aactcagcaa cccagcaaac acaggacaga tgaggagctc   1560

cagccaccta ccaccacagt tgccaggtct ggaacacccg cagtagaaaa caagcagcag   1620

attggggatg ctattcggat gatagtcaga gggactcttg gcagctgtag cagcagcagt   1680

gaatgccttg aagacagtac catgggaagt gttgcagaca cagtggcaag ggttcttcgg   1740

ggatgtctgg aaaacatgcc ggaagctgat tgcattccca aagagcagct gagcacatca   1800

tttcagtggg tcaccaaatg ggttgattac tctaacaaat atggctttgg gtaccagctc   1860

tcagaccaca ccgtcggtgt ccttttcaac aatggtgctc acatgagcct ccttccagac   1920

aaaaaaacag ttcactatta cgcagagctt ggccaatgct cagtttccc agcaacagat    1980

gctcctgagc aatttattag tcaagtgacg gtgctgaaat acttttctca ttacatggag   2040

gagaacctca tggatggtgg agatctgcct agtgttactg atattcgaag acctcggctc   2100

tacctccttc agtggctaaa atctgataag gccctaatga tgctctttaa tgatggcacc   2160

tttcaggtga atttctacca tgatcataca aaaatcatca tctgtagcca aaatgaagaa   2220

taccttctca cctacatcaa tgaggatagg atatctacaa ctttcaggct gacaactctg   2280

ctgatgtctg gctgttcatc agaattaaaa aatcgaatgg aatatgccct gaacatgctc   2340

ttacaaagat gtaactgaaa gactttтcga atggaccta tgggactcct cttttccact    2400

gtgagatcta cagggaagcc aaaagaatga tctagagtat gttgaagaag atggacatgt   2460

ggtggtacga aaacaattcc cctgtggcct gctggactgg gtggaaccca gaaccaggct   2520

aaggcataca gttcttgact ttggacaatc ccaagagtga accagaatgc agttttcctt   2580
```

```
gagatacctg ttttaaaagg tttttcagac aattttgcag aaaggtgcat tgattcttaa   2640

attctctctg ttgagagcat ttcagccaga ggactttgga actgtgaata tacttcctga   2700

aggggaggga gaagggagga agctcccatg ttgtttaaag gctgtaattg gagcagcttt   2760

tggctgcgta actgtgaact atggccatat ataatttttt ttcattaatt tttgaagata   2820

cttgtggctg gaaaagtgca ttccttgtta ataaactttt tatttattac agcccaaaga   2880

gcagtattta ttatcaaaat gtcttttttt ttatgttgac cattttaaac cgttggcaat   2940

aaagagtatg aaaacgcaaa aaaaaaaaa aa                                    2972
```